A COMPARATIVE STUDY OF SOME OF THE LEADING MUSIC SYSTEMS OF THE 15TH, 16TH, 17TH & 18TH CENTURIES.

by
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B A, LL B

FOREWORD

These short commentaries of the Sangeet Granthas of the past ages form a very valuable contribution to the music literature of modern times In these the author has left behind a smooth path for a student of the past history of our music through the labyrinth of the ever changing system of Rag-Raginis Indeed, had it not been for the late learned Prof Bhatkhande's persistent application to the study of the old literature on the subject with a definite aim at solving the diverse and therefore mysterious and baffling methods of explanation of a common topic with which it is filled perhaps the history of our music of the past centuries would have remained oblivious to us today Ever since the time of the Sangeet Ratnakar our music had been going through a process of reformation as it were The old system of Grama-Moorchhana-Jati was abandoned and gave place to the Raga-Ragini or the Janya-Janak (Thata-Raga) theory. In Northern India the Mahomedan rulers proved to be great patrons of music and dancing They brought with them their own music which, as it always happens in this country, was assimilated into the then Hindu music New melodies, new styles of interpretation, new types of songs, new Talas were introduced Thus today we have got what we know as Hindustani music which is a beautiful monument of the fusion of Hindu and Islamic Culture

In the midst of this reformation a few Granthas expounding the system of music in vogue in their respective times were written Two of these, Ahobala's Sangeet Parijat and Somnatha's Ragavibodh had already been published when Prof Bhatkhande took up the study of the Granthas This does not however mean that they were understood by anybody In their anxiety to link up the ancient system of music with that current in their own days the authors of these Granthas have rendered themselves difficult to understand E. G Somnath explains his music scale in terms of Shrutis as the ancients did As to what was his exact interval of the Shruti he is mum He bases his theory on a chromatic scale which is current today in the south as Mukhari and describes his flats and sharps with reference to this scale In the north even perhaps at Somnatha's time a diatonic scale had already been adopted as the standard scale Ragavibodh was therefore difficult for the northerners to understand Similarly Ahobala dutifully accepts the Shrutis and Moorchhanas of the ancients and describes them in elaborate details in the Swaradhyaya. When however he comes to the Ragadhyaya he quietly selects from the Swaradhyaya whatever had a practical bearing on the music current in his time and throws the rest of the bundle overboard

Even the facts that Somnatha's standard scale was like the Mukhari scale of the Karnatak system of music and that Ahobala's standard scale was like the Kaphi of the Hindustani system of music were hardly discovered before Professor Bhatkhande's commentaries on these Granthas, namely Raga-vibodha-Praveshika and Parijata-Praveshika came out. At least there is no record to prove it.

Under such circumstances it was but natural that the literature of our music of the past should have remained unattended to so long.

These articles deal with over a dozen Granthas and give enough information which makes it quite easy to understand them. Some portion of this book has already appeared in print in "Sangeeta" the Journal of the Morris College of Hindustani Music, Lucknow. But unfortunately the journal having ceased to appear after the fifth issue the rest of this book remained unpublished until the late Mr. Bhalchandra Sitaram Sukthankar the editor and publisher of the Kramik Pustak Malika thought of bringing the whole series out into a book form. This volume was half way through the press when unfortunately Mr. Sukhthankar fell ill and died in April 1940. The printing was taken up again a few months ago. Coming, as it is, from the pen of the foremost authority on the subject, it need hardly be added that this book will prove a very interesting and enlightening study.

S. N. Ratanjankar

Contents

But how are we going to systematise it? What systems are we going to adopt? We know that our music in the past was highly systematised and that the system adopted was the best for its needs. I would even go further and say that the system adopted by some of our old Shastra writers would be found suitable even for the classification or systematisation of our own music. The putting on a different suit of clothes does not change the individual clothed, and similarly, though there may be, and are changes in the music as it is now, from what it was then, there is no such fundamental alteration in it as to make the modern music an essentially different thing. It is, therefore, necessary, in my opinion, to consider the system or systems adopted by our old Shastra-writers in order to construct a good workable system for our present music. Though the external appearance of our music has to some extent changed, yet, the frame work, to my mind, appears the same. This is apart from the pride one feels for what is one's patrimony. Then again by studying the ancient texts, we can also restore some of the Ragas, which were formerly popular, but have ceased to be in vogue and can correct the method of singing some melodies which are at present incorrectly sung. The principal changes which have taken place, are either as regards the names of the Ragas, or the notes used in them, or as to the Thatas to which they are to be assigned; or perhaps some of the ancient graces and "Gamaks" have lost their ancient forms and so forth but in the main the substratum of our music is undoubtedly the music of the past, and that being so, a study of the past music, in my opinion, is essential. All art, as we know from experience, is progressive, and the Music of today will be the music of the past in a few years more. But the study of any art is incomplete without the study of the progress which it has made, which again is of material assistance in the study of the art as it exists. It is rightly observed that in order that a body of artists who represent any particular art should really be proficient in it, they must be well-versed in the fundamental principles of it. In the present moment, unfortunately, most of our professional artists are not learned in the science of music and the theorists are not well-versed in the art. I am only speaking of my part of the country. This state, however, is happily passing away, and the Indian nation is now taking a great interest in the subject. It is to be expected that at no distant future we shall have people who combine in themselves both the art and the science of Music and then the progress we make will be both rapid and stable.

Having so far tried to show the importance of the study of the ancient sanskrit books, I shall now come to the second question, namely, the subject matter of the study. Before taking up the consideration of this question, I may here point out that the Sanskrit works I have selected for consideration almost all belong to the period when the

country was under the influence of the Mohammedan rulers Th
Granthas belong, as will appear, from the title of this series, to the
15th, 16th, 17th and 18th centuries

The number of treatises on Indian Music which are still extant will go over a hundred, and these lie scattered all over the country Intending students will find a list of the works extant in the famous book on Indian Music by Captain Day, the reports of the Poona Gayan Samaj, and the catalogue of the Granths of the Bikaner library by the late Rajendralal Mitra I have already mentioned in the first part of Hindustani Sangeeta Paddhati at pages 192-195, the names of the music works which I came across during my travels The libraries of Bikaner, Mysore and Trivandrum contain the most valuable collections of Music books I am informed that there is a decent collection of Music Manuscripts in the Nepal library too, but I have not been able yet to get access to it Still we can get at nearly fifty to seventy-five treatises on music from libraries I have mentioned above I mention hereunder the treatises which are available in each of the libraries above referred to

In the Library of His Highness the Maharajah of Bikaner there is a large collection of Sanskrit works on Music I give the names of some of them below:

1 सगीत सूत्र
2 रत्नाकरटीका
—,—सि॰ भू॰
3 स॰ राजरत्नकोश
4 अनूप स. रत्नाकर
5 स॰ अनूप विलास
6 स॰ अनूपांकुश
7 संगीत विनोद
8 सगीत वर्तमान
9 स॰ अनूपराग सागर
10 सगीतोपदेश
11 शृगार हार
12 स्वरमेल कलानिधि
13 हृदय कौतुक
14 हृदय प्रकाश
15 स॰ कल्पतरु
16 राग विबोध
17 रागमाला
18 राग ध्यान
19 राग काव्यरत्न
20 सकीर्ण राग
21 गमक मजरी
22 स॰ मकरद
23 सं. मुक्तावली
24 नृत्याध्याय
25 पुखादि चाली
26 रागमाला (पुडरीक)
27 रागमजरी—,,
28 नर्तन निर्णय–,,
29 स॰ रा॰ चद्रोदय ,,
30 सगीत शारीर
31 स॰ सार नृत्याध्याय
32 स्वराध्याय भाषा
33 मुरलीप्रकाश
34 सगीत पारिजात

35 सं० सार कलिका
36 सं० रागतत्त्वविबोध
37 हनुमन्तरागविभाषा
38 सं० रामकौतुक
39 सं० उपनिषत्सार
40 संगीत दर्पण
41 सं० आनंदजीवन
42 सं० दर्पण-हिंदी
43 रागमाला
44 संकीर्णरागाध्याय
45 रत्नाकर टीका (कल्लीनाथ)

The following Sanskrit works will be available in the Government Oriental Library, Mysore.

1 अभिनयदर्पण
2 अभिनयमुकुट
3 अभिनवभरतसार
4 आदि भरत
5 संगीत दर्पण
6 भरतसार
7 संगीत चूड़ामणि
8 संगीत मकरंद
9 अभिनयप्रकरण
10 रत्नाकरव्याख्या
11 संगीत लक्षण
12 संगीतसमयसार
13 संगीतलक्षणदीपिका
14 स्वरप्रस्तार
15 स्वरमेलकलानिधि

The following Music granthas will be found in the Palace Library at Trivandrum.

1 अंगहारलक्षण
2 नाट्यग्रंथ
3 नाट्यवेदविवृत्ति
4 नृत्यरत्नाकर
5 बालरामभरत
6 नाट्यवेद
7 भावप्रकाश
8 रसार्णवसुधाकर
9 संगीत चिंतामणी
10 ,, चूड़ामणि
11 संगीत सुधा
12 ,, सुधाकर
13 सप्तस्वरलक्षण
14 स्वरतालादिलक्षण

The following will be found in the Central Library at Baroda:

1 संगीत रत्नावली
2 संगीत रसकौमुदी
3 स्वरमेलकलानिधि
4 संगीत मकरंद

I am informed there are some more lately acquired by the Baroda Government.

The following are the treatises available in the Library of His Highness the Maharaja of Kashi.

1 संगीत रत्नाकर
2 संगीत रघुनंदन
3 सं० रत्नाकर स्वराध्याय
4 संगीत सारावली
5 संगीत पारिजात
6 रागसारावली
7 रत्नाकर टीका सिं० भू०
8 उत्पन्ने गुपा-(पर्शन)
9 नघमाते आसफी (पर्शन)
10 नाददीपक

The following are the Sanskrit works available in the Tanjore Palace Library:

1 सगीत सारामृत
2 ,, मुक्तावली
3 रागरत्नाकर
4 अभिनयदर्पण
5 अष्टोत्तरशतताललक्षणं
6 तालप्रस्तार
7 ताल लक्षण
8 ताल दीपिका
9 रागप्रस्तार
10 तालदशप्राणदीपिका
11 राग लक्षण
12 दतिल कोहलीयम्
13 सगीत मकरद
14 चत्वारिंशच्छत राग निरूपणम्
15 सगीत दर्पण
16 सं० रत्नाकर

The Government Oriental Library at Madras has the following

1 नृत्ताल पुराण
2 राग विशेष
3 सगीत दर्पण
4 ,, रत्नाकर
5 सगीत सारसग्रह
6 स्वरमेलकलानिधि
7 सगीताध्याय
8 कोहलरहस्य

The following works are supposed to have been acquired for the Royal Asiatic Library at Calcutta, by Mahamahopadhyaya Harprasad Shastri:

1 रागविबोध
2 गांधर्ववेद
3 रागचुडकमणि
4 सगीतसंग्रह
5 संगीतविद्यानिदान
6 संगीतकल्पलता
7 सगीत रघुनदन
8 आनदजीवन
9 सोमेश्वरमत
10 गीतगिरीशकाव्य
11 संगीत रसकौमुदी
12 सगीतसार
13 गीतसार
14 भरतगानशास्त्र
15 सामप्रकाश

Having so far given a list of the works which are extant on the subject, and having also stated where they are available, I shall now mention the titles of such of them as have been already printed and published

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5 चतुर्दण्डिप्रकाशिका
6 संगीत सारामृत
7 सगीत मकरद
8 सद्रागचद्रोदय
9 रागतरंगिणी
10 सगीत पारिजात
11 हृदयकौतुक
12 हृदयप्रकाश

35 सं० सार कलिका
36 सं० रागतत्त्वविवोध
37 हनुमन्तरागविभाग
38 सं० रामकौतुक
39 सं० उपनिषत्सार
40 संगीत दर्पण
41 सं० आनंदजीवन
42 सं० दर्पण-हिंदी
43 रागमाला
44 संकीर्णरागाध्याय
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2 अभिनयपुकुट
3 अभिनवभरतसार
4 आदि भरत
5 संगीत दर्पण
6 भरतसार
7 संगीत चूडामणि
8 संगीत मकरंद
9 अभिनयप्रकरण
10 रत्नाकरव्याख्या
11 संगीत लक्षण
12 संगीतसमयसार
13 संगीतलक्षणदीपिका
14 स्वरप्रस्तार
15 स्वरमेलकलानिधि

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1 अंगहारलक्षण
2 नाट्यग्रंथ
3 नाट्यवेदविवृत्ति
4 नृत्यरत्नाकर
5 बालरामभरत
6 नाट्यवेद
7 भावप्रकाश
8 रसार्णवसुधाकर
9 संगीत चिंतामणी
10 ,, चूडामणि
11 संगीत सुधा
12 ,, सुधाकर
13 सप्तस्वरलक्षण
14 स्वरतालादिलक्षण

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3 स्वरमेलकलानिधि
4 संगीत मकरंद

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3 सं० रत्नाकर स्वराध्याय
4 संगीत सारावली
5 संगीत पारिजात
6 रागसारावली
7 रत्नाकर टीका सिं० भू०
8 उकूदे गुषा-(पर्शन)
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10 नाददीपक

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2 ,, मुक्तावली
3 रागरत्नाकर
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5 अष्टोत्तरशततालक्षण
6 तालप्रस्तार
7 ताल लक्षण
8 ताल दीपिका
9 रागप्रस्तार
10 तालदशप्राणदीपिका
11 राग लक्षण
12 दत्तिल कोहलीयम्
13 संगीत मकरंद
14 चत्वारिंशच्छत राग निरूपणम्
15 संगीत दर्पण
16 सं० रत्नाकर

The Government Oriental Library at Madras has the following

1 नृत्ताल पुराण
2 राग विवेक
3 संगीत दर्पण
4 ,, रत्नाकर
5 संगीत सारसंग्रह
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6 संगीतकल्पलता
7 संगीत रघुनंदन
8 आनंदजीवन
9 सोमेश्वरमत
10 गीतगिरीशकाव्य
11 संगीत सर्वोपदी
12 संगीतसार
13 गीतसार
14 भरतगानशास्त्र
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3 स्वरमेलकलानिधि
4 रागविबोध
5 चतुर्दण्डिप्रकाशिका
6 संगीत सारामृत
7 संगीत मकरंद
8 सद्रागचंद्रोदय
9 रागतरंगिणी
10 संगीत पारिजात
11 हृदयकौतुक
12 हृदयप्रकाश

35 सं० सार कलिका
36 सं० रागतत्त्वविबोध
37 हनुमन्तरागविभाषा
38 सं० रागकौतुक
39 सं० उपनिषत्सार
40 संगीत दर्पण
41 सं० आनंदजीवन
42 सं० दर्पण-हिंदी
43 रागमाला
44 संकीर्णरागाध्याय
45 रत्नाकर टीका (कल्लीनाथ)

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1 अभिनयदर्पण
2 अभिनयमुकुट
3 अभिनवभरतसार
4 आदि भरत
5 संगीत दर्पण
6 भरतसार
7 संगीत चूडामणि
8 संगीत मकरंद
9 अभिनयप्रकरण
10 रत्नाकरव्याख्या
11 संगीत लक्षण
12 संगीतसमयसार
13 संगीतलक्षणदीपिका
14 स्वरप्रस्तार
15 स्वरमेलकलानिधि

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1 अंगहारलक्षण
2 नाट्यग्रंथ
3 नाट्यवेदविवृत्ति
4 नृत्तरत्नाकर
5 बालरामभरत
6 नाट्यवेद
7 भावप्रकाश
8 रसार्णवसुधाकर
9 संगीत चिंतामणी
10 ,, चूडामणि
11 संगीत सुधा
12 ,, सुधाकर
13 सप्तस्वरलक्षण
14 स्वरतालादिलक्षण

The following will be found in the Central Library at Baroda:

1 संगीत रत्नावली
2 संगीत रसकौमुदी
3 स्वरमेलकलानिधि
4 संगीत मकरंद

I am informed there are some more lately acquired by the Baroda Government.

The following are the treatises available in the Library of His Highness the Maharaja of Kashi.

1 संगीत रत्नाकर
2 संगीत रघुनंदन
3 सं० रत्नाकर स्वराध्याय
4 संगीत सारावली
5 संगीत पारिजात
6 रागसारावली
7 रत्नाकर टीका सिं० भू०
8 उक्दे गुषा-(पर्शन)
9 नघमाते आसकी (पर्शन)
10 नाददीपक

ed out of the ancient Swaras I may quote here what my learned friend Dr. Prabhakar Bhandarkar of Indore has to say about the difficulty of determining the relative pitches of the Swaras used in the Sama-Veda. He says "From Sangeeta Ratnakara I Chap v P, 58, and the Naradi Shiksha, it would appear that a "Rig" was chanted in mono tone, a "Gatha" in two notes, and a Sama in three notes, a scale of four swaras seems also to have been used, and was called Swarantara. In what relations of pitch the notes stood in the last three cases, it is impossible to say. We are also ignorant of the stages by which the three notes of the Sama chant rose to the number seven, nor can we say with any certainty what relation these seven notes bore to the well known seven notes of the later music The former were named Krishta, Prathama, Dwitiya, Tritiya, Chaturtha, Mandra and Atiswara It is certain that these are in descending order of pitch, but in what exact relation, it is impossible to say Moreover, the names of the Sama notes, seem to have varied from time to time and in different parts of the country The enumeration and notation by the first seven numerals is more modern " (Vide P 162 Indian Antiquary July, 1912)

In order to obtain, if possible, more information about the exact pitch relations of the Sama swaras, I personally visited Benares and consulted there such learned Samavedis as Wamanacharya, Bapat Shastri, Ganesh Guru and others, but I am sorry to say that they were unable to give any satisfactory explanation I understand, however, that a lot of research work on this subject is going on in the southern presidency where, it is said, a more intimate knowledge of the Sanskrit granthas exists For myself I have already confessed that I am unable to throw any light on the Sama scale just at present In any case I suppose, it would not be of any practical use to enter into the subject of Sama music for the study of our present music

The Granthas with which I propose to deal in this series, as being, in my opinion, necessary for such study will be

1 रागतरंगिणी
2 हृदयकौतुक
3 हृदयप्रकाश
4 संगीत पारिजात
5 सद्रागचंद्रोदय
6 रागमाला (पुंडरीक)
7 रागमंजरी (पुंडरीक)
8 नर्तननिर्णय
9 रागतत्त्वविबोध
10 अनूपसंगीतरत्नाकर
11 अनूपविलास
12 अनूपांकुश
13 रसकौमुदी
14 स्वरमेलकलानिधि
15 रागविबोध
16 संगीत सारामृत
17 चतुर्दण्डिप्रकाशिका
18 रागलक्षणम्

We [illegible] take it for granted that the first thirteen of these relate to the music of Northern India, and the remaining five to the music of the Southern presidency. It is well-known that there are [illegible] systems in the country. The Northern system is known as the Hindustani system and the Southern is called the Karnatik system. I am not an expert in the Southern system but I have studied [illegible] treatises relating to that system. I am of opinion that a student [illegible] follow the Granthas [illegible]mela-Kalanidhi, Raga Vibodha, [illegible] Chaturdandi Prakashika and Raga Lakshana [illegible] knowledge of the Southern system.

[illegible] will perhaps be surprised to see that among the Granthas I propose to deal with, the names of the Natya Shastra of [illegible] do not appear. I have omitted them [illegible] purpose. I do not deny their importance, but as far as I know none of our modern scholars have successfully solved the [illegible] questions that face a student who wishes to [illegible] study of these ancient works. I know there are some works dealing with them, but they do not satisfy me. Attempts are [illegible] to show that the scale used by Bharata and Sharangdeva is exactly the same as the one used by our present musicians. The [illegible] theory of [illegible], by some clever interpretation, or what I may call misinterpretation, is sought to be unearthed from the ancient Sanskrit works. Ancient Murchhanas, Jatis, and Ragas are boldly placed before the public for acceptance in their new garbs, though it must be stated that these have upto now failed to impress those who have devoted some of their time to the study of the Granthas. I have therefore studiously avoided entering these controversial matters in these articles and have selected those Granthas only which [illegible] appeared to me to be of great practical importance. I do not, for a moment, insinuate that the attempts to solve Bharata and Ratnakara that I mentioned above are deliberately mischievous. We may say they are perfectly honest. But as they fail to satisfy the usual test I have preferred to omit the consideration of the two ancient treatises on this occasion. I may mention here that there is a great difference of opinion among our modern scholars themselves as to the question whether or not the shruti was a fixed unit. Some scholars say it was, others deny that. Needless to say, the definition of Shuddha scale hinges on the solution of this question. We all know that the Ragas of Ratnakara are defined in terms of the Murchhanas and Jatis, and these would remain indefinite so long as the Shuddha scale remains unsatisfactory and indefinite. So that, until there is a consensus of opinion as to the right value of a Shruti and until it becomes possible to determine the Shuddha scale of Natya

... and Ratnakara, the two works are bound to remain sealed books. These two books, therefore, in my opinion, go outside the sphere of study of the ordinary music student and enter that of the research scholar. Reverting then to the list I have already mentioned, I shall deal with the Granthas therein named About these there is a tolerable amount of certainty and also not much difference of opinion. I do not suggest that the music of those books is the same as that of Ratnakara or of Bharata, but these treatises are likely to throw considerable light on the music we sing and play today

The great difficulty which a student of Natya Shastra and Ratnakara meets with at the very outset is that of correctly locating the positions of the Shrutis and the Swaras of those two ancient treatises In the absence of a satisfactory solution of these, the remaining portions of the treatises remain perfectly unintelligible The Gramas, Murchhanas, Jatis and the Ragas, have all to be evolved, as we know, from the Shuddha and Vikrita Swaras which again depend upon their Shrutis. The positions of those Shrutis and Swaras, therefore, require to be placed beyond all reasonable doubt It will perhaps not be out of place here to indicate how the difficulty for the student arises while attempting to study the Natya Shastra I do not think it is anywhere disputed now that the Shruti Swara arrangement of Sharangdeva is essentially the same as that expounded by Bharat. If we then are able to arrive at any satisfactory conclusions as regards Bharata's Shrutis and Swaras, it would hardly be necessary to investigate the Shrutis and Swaras of Sharangdeva We are told by our research scholars that Bharata lived in the 5th century A D and that Sharangdeva wrote his Ratnakara about the middle of the thirteenth century A D We shall not dispute these dates. The great question before us is, what does Bharata say about his shrutis and Swaras, in the Natya Shastra. Fortunately for us, Bharata has very lucidly explained his Shrutis and Swaras at P 304, Chap 28 of his work the Natya Shastra, and it will be interesting to go through his explanation But while doing so, it will be useful to constantly bear in mind the following two or three important rules generally followed by careful research scholars while interpreting ancient texts

(1) The mind has to be kept entirely free from any preconceived ideas or theories

(2) No statements or assumptions should be made which are not strictly warranted by the text in hand.

(3) In the interpretation of ancient texts the directions given by the author himself as a guide for interpretation must be strictly adhered to It will not be permissible to take a guide what subsequent writers have said on the s[illegible]

With these important cautions in mind, we shall now approach the subject of Bharata's Shrutis and Swaras.

To begin with, says the author: "मध्यमग्रामे श्रुत्यपकृष्टः पंचमः कार्यः। पंचम श्रुत्युत्कर्षादपकर्षाद्वायदन्तरं मार्दवादायतत्त्वाद्वा तत्प्रमाणश्रुतिः In fact, in this small sentence he lays down the definition or rather the measurement of his Shruti. He takes it for granted that his learned readers are practical *musicians, who know the difference between the Panchama of his Shadja Grama and that of the Madhyama Grama.* With that assumption, *he further explains his method of fixing the Shrutis of his scale.* The Sanskrit passage may be translated thus: "In the Madhyama-Grama, the 'Panchama' is lowered one shruti. This lowering of the Panchama to obtain the Madhyama Grama 'Panchama' or the raising of the Madhyama Grama 'panchama' *by one shruti to obtain the* Shadja Grama 'panchama' is the measure of a shruti."

निदर्शनं तासामभिव्याख्यास्यामः।

Translation.—"The *following examples will clearly indicate the* position of the shrutis."

यथा द्वे वीणे तुल्यप्रमाणतंत्र्युपवादनदण्डमूर्च्छने षड्ज ग्रामाश्रिते कार्ये।

Translation.—"First let the vinas having wires, instruments of playing, *wooden frame, and murchhanas be made of identical quality and let them both be tuned to the Shadja Grama scale."* (Evidently *he expects readers to know how to do it).*

Now,

तयोरेकतरस्यां मध्यमग्रामिकीं कृत्वा पंचमस्यापकर्षे श्रुतिम्।

Translation.—"Set *one of the two* Vinas to Madhyama Grama by lowering its 'panchama' one shruti only." (The reader as a practical musician is expected to know the lowered 'panchama').

तामेव पंचमवशात् षड्ज ग्रामिकीं कुर्यात्

Translation.—"The next step is to make this Madhyama-grama-vina a Shadja-grama-vina, not by restoring the lowered 'panchama' to its original pitch, but by taking it as a real Shadja-grama 'panchama' of four srutis." (In other words the author wishes the reader to lower all the other swaras of the scale, namely सा, रे, ग, म, ध, नि,

Thus, एवं (सा वीणा) श्रुतिरप कृष्टा भवति।

Translation.—"The whole Madhyama-grama-vina after this would be lower than the other untouched shadja-grama-vina by one sruti."

पुनरपि तद्वदेवापकर्षात् ।

Translation —"By repeating the same operation (i e by lowering the new madhyama-grama-vina 'panchama' one sruti and accepting the same as shadja grama 'panchama') the result would be

गांधारनिषादवन्तौ स्वरौ इतरस्यां धैवतर्षभौ प्रविशतः द्विश्रुत्यधिकत्वात् ।

Translation —"The swaras 'Gandhara' and 'Nishada' would coincide with the 'Rishabha' and 'dhaivata' of the Shadja-grama-vina because they are only two srutis higher in pitch than the 'rishabha' and 'Dhaivata'"

पुनस्तद्वदेवापकर्षाद्धैवतर्षभावितरस्यां पञ्चम षड्जौ प्रविशत· त्रिश्रुत्यधिकत्वात् ।

Translation —"Another similar operation and the 'dhaivata' and 'rishabha' of the 'Chala Vina' will enter, that is, will coincide with the 'panchama' and 'Shadja' of the untouched vina the distance between them being only three srutis (We know that according to all ancient writers the 'dhaivata' and 'rishabha' are only three srutis higher than the panchama and 'Shadja' respectively) तद्वत्पुनरपकृष्टायां तस्यां पञ्चमम ध्यमषड्जा इतरस्यां मध्यम गांधार निषादवन्तः प्रवेक्ष्यति चतुः श्रुत्यधिकत्वात् ।

Translation —"One more repetition, and the 'panchama' 'Madhyama' and 'shadja' of the chala-vina will coincide with 'madhyama' 'gandhara' and 'nishada' of the 'achala-vina,' the distance between the two sets of swaras being only four srutis"

एवमनेन निदर्शनेन द्वैग्रामिक्यो द्वाविंशतिः श्रुतयः प्रत्यवगन्तव्याः ।

Translation —"This illustration will clearly show the twenty two srutis of the two gramas the author expects the reader to locate the srutis and Swaras in the light of this explanation.)

If we assume our interpretation of the text to be correct it will appear that Bharata's reasoning is quite lucid and at the same time sufficiently simple The following observations will make Bharata's view more clear. To begin with, Bharata says, that the two vinas are first to be tuned to the shadja grama scale We will say there are only seven wires to represent the seven notes of the scale on each of the two vinas Evidently then, seven wires are to be tuned to the seven correct notes of the shadja grama scale I have already said that Bharata pre-supposes in his reader a perfect knowledge of the 'panchamas' of the two Gramas and an ability to tune the vinas according to the directions he proposes to give When one of the vinas is to be *made Madhyama gramic, all that he means is that the wire representing* the 'panchama' in the shadja grama is to be slightly loosened so as to make it produce the 'panchama' of the madhyama, all other notes remaining in their original positions The second direction of the author is most important He directs the madhyama gramic vina to be

verted again into a shadja gramic vina, but he wants this to be done not by restoring the 'panchama' to its original pitch, but by accepting the changed 'panchama' as a proper 'panchama' for the new shadja gramic vina. Now we know that this can be accomplished only by lowering all the other notes of the vina by one sruti and that is what Bharata says will be the result. He says

" एवं सा वीणा श्रुत्यपकृष्टा भवति । "

Translation.—When the Chala-vina is thus made shadja gramic the pitch of 'Sa' will be three srutis, that of 'ri' will be six srutis, of 'ga' eight sruti and so forth. By repeating this process another series of srutis namely, two, five, seven, eleven, fifteen, eighteen, twenty will be discovered. But the 'ga' and 'Ni' of the Chala vina will now coincide with the 'ri' and 'dha' of the achala vina. On another repetition of the same process, the swaras 'sa', 'ma', 'pa' of the chala vina will coincide with the 'ni', 'ga' and 'ma' of the Dhruva or achala vina.

It will be readily conceded, I suppose that the process so elaborately described by Bharata will be possible only if the Sruti interval remained the same all through the octave. According to Bharata then, the sruti was a real unit of measurement in determining the ratio between the several Swaras. In other words, the ratio of the first to the second sruti was equal to the ratio between any two consecutive srutis. There are twenty two srutis in all and if we take the starting point to be the sruti of 'ni' in the lower octave, and as equal to 1, then the twenty-second sruti, that is of the higher 'ni' would be 2. There being twenty-two equal intervals between the higher and the lower 'ni' each interval would be equal to the twenty-second root of 2.

I do not claim any originality for this explanation of Bharata's srutis. The view was submitted before the first All-India Music Conference by a learned scholar of my part of the country, namely the late Mr. V. V. Phadke, retired first class subordinate judge, in the year 1916. The view appeals to me, and I have therefore, thought it proper to place it before my readers. The late Pandit Abraham of Tanjore also read a paper before the first All-India Music Conference at Baroda on the srutis of Sharangdeva Pandit, and showed that no scale in which the srutis were taken as unequal could under any circumstances be accepted as Sharangdeva's shuddha scale. The Pandit's paper is now printed and published, and I shall not write about it here.

The chief object of these articles is to place before the readers a comparative analysis of the different Sanskrit works on Indian Music written at different times, in order that such comparison should help in the determination of a suitable system for our present Hindustani Music.

In dealing with the Sanskrit texts, I propose, as I said before, to give in each case the following details —

(1) The name and place of the author, so far as can be traced
(2) The probable date of the work
(3) The explanation of the Srutis and Swaras as explained in the treatise
(4) The Thatas, if any, used for the classification of the Ragas
(5) The Janya Ragas and their classification under the Thatas
(6) General remarks

In some cases charts showing the positions of the Srutis and Swaras will be given for ready reference

RAGA TARANGINI

The author of this work is Lochana Pandit He lived some where in the Mithila district The date of the work as given by the author himself is as folows.

भुजवसुदशमितशाके श्रीमद्बल्लालसेनराज्यादौ ।
वर्षैकषष्टिभोगे मुनयस्त्वासन् विशाखायाम् ॥

According to this, the date works out at Shaka year 1082 Some of our music scholars are of opinion that the date is more or less doubtful, and in support of their view they rely on the following internal evidence supplied by the work Lochana Kavi quotes from another poet Vidyapati, who, it is believed, lived about the end of the fourteenth century A D The late Raja S M Tagore in his Universal History of Music tells us that Vidyapati was in the service of Shiva Singh the Raja of Mithila in the latter half of the fourteenth century A.D Copper olate evidence also goes to show that a Rajah of Mithila named Shiva Singh gave a jahagir to the poet Vidyapati in the year 1399 A D Unless it can be proved that this Vidyapati is not the same as that from hom Lochana quotes, we must uphold the contention of the scholars ho doubt the correctness of Lochana's date Another point these holars lay stress on is that Lochana in his Tarangini mentions clearly hamedan Ragas like 'Imam' and 'Farodast', which ragas, they argue ld not have become so popular about the Shaka year 1082 when work purports to have been written Lochana in the above sloka s some astronomical details, but as I have not been able to ascer- what the reference really means, I am unable to fix the date fro

them. Hrdaya Narayana Deva, the author of Hrdaya Prakasa and Hrdaya Kouttuka quotes from the Tarangini. These two last named treatises, were written about the year 1660 A.D.

We shall now go into the subject matter of the Tarangini. Lochana, after giving the divisions of Gita as Nibaddha and Anibaddha at once takes up the question of the Srutis. In common with all his predecessors, he recognises twenty two srutis, to the scale, with their well-known names Tivra, Kumudvati, etc. The distribution of srutis among the seven shuddha swaras, as चतुश्चतुश्चतुश्चैव षड्जमध्यमपञ्चमाः । इ० is also accepted by him. The swara becomes manifest on its last sruti. The accompanying chart will show at a glance how he places his swaras on his twenty two srutis.

Chart Showing the Shuddha and Vikrita Swaras of the Raga Tarangini.

Shrutis.	Shuddha swaras.	Vikrits swaras.	Shrutis.	Shuddha swaras.	Vikrits swaras.
१ तीव्रा			१२ प्रीती	...	(तीव्रतम गांधार)
२ कुमुद्वती			१३ मार्जनी	शुद्ध मध्यम	अति तीव्रतम गांधार
३ मन्दा			१४ क्षिती		
४ छन्दोवती	शुद्ध षड्ज		१५ रक्ता	...	तीव्रतर म
५ दयावती			१६ सन्दीपिनी		
६ रंजनी	...	कोमल ऋषभ	१७ आलापिनी	शुद्ध पंचम	
७ रतिका	शुद्ध ऋषभ		१८ मदन्ती		
८ रौद्री			१९ रोहिणी	...	
९ क्रोधा	शुद्ध गांधार		२० रम्या	शुद्ध धैवत	कोमल धैवत
१० वज्रिका	...	(तीव्र गांधार)	२१ उग्रा		
११ प्रसारिणी	...	तीव्रतर गांधार	२२ क्षोभिणी	शुद्ध निषाद	
१ तीव्रा	...	(तीव्र निषाद)	२ कुमुद्वती	...	तीव्रतर निशाद=काकली
३ मन्दा	...	(तीव्रतम निषाद)			

(For detailed explanation, the reader is requested to refer to the translation which follows).

रागतरंगिणी स्वरसंज्ञा प्रकरणम् ।
स्वस्वशेषश्रुतिं त्यक्त्वा यदा ऋषभ धैवतौ ।
गीयेते गुणिभिः सर्वैस्तदा तौ विकृतौ मतौ ॥

Translation.—When the notes 'ri' or 'dha' are played or sung on their penultimate srutis, literally when they give up their last srutis,

they are supposed by experts to have become komal ri and Komal dha, (flat 'ri' and flat 'dha').

Observation.—*Shuddha ri and shuddha dha are the sounds of the seventh and twentieth srutis respectively in the ordinary twenty two sruti scale. Komal ri and komal dha therefore, will be the sounds of the sixth and, the nineteenth srutis The Orthodox view has always been that a shuddha swara manifests itself on its last sruti*

शृणाति मध्यमस्यापि गांधारः प्रथमां श्रुतिम् ।
यदा तदा त्रनैरेव तीव्र इत्यभिधीयते ॥

Translation.—*When Gandhara stands on the first sruti of Maddhyama it is said by the experts to become 'tivra' or sharp*

Observation.—*The srutis between shuddha 'ga' and shuddha 'ma' are four, the fourth being the sound of the shuddha 'ma' The gandhara therefore could move up four srutis, right upto the place occupied by the shuddha 'ma'. It will be carefully noted that the note 'ri' only became komal but not tivra. The note gandhara again, only moved up and became tivra, but was not allowed to go back and become komal.*

द्वितीयामपि चेदेव तदा तीव्रतरः स्मृतः ।
तृतीयामपि चेदेवतदातीव्रतमः स्मृतः ।
चतुर्थीमपि चेदेवंमतितीव्रतमः स्मृतः ॥

Translation.—*When gandhara stands on the second sruti of maddhyama, it becomse tivratara 'ga' and when it stands on the third sruti of that note it becomes tivratama 'ga'. When again it rises up to the fourth or last sruti of 'ma' it becomes ati-tivratama 'ga'.*

Observation.—*A glance at the sruti swara chart will show that ati-tivatama 'ga' and shuddha 'ma' are identically the same sound The object of giving two different names to the same note will be clear when we examine the difinitions of the ragas later on.*

पञ्चस्य च निशादश्चेद् गृह्णाति प्रथमां श्रुतिम् ।
तदा सर्गीतिभिः सोऽपि तीव्रइत्यभिधीयते ॥
द्वितीयामपि चेदेव तदा तीव्रतरः स्मृतः ।
तृतीयामपि चेदेव तदा तीव्रतमः स्मृतः ॥

Translation.—*When nishada takes the first sruti of shadja, it becomes tivra nishada, according to those who are learned in music. When nishada takes the second sruti of shadja, it becomes tivratara 'ni' and when it takes the third sruti of shadja, it becomes, tivratama ni.*

Observation.—It will be observed that although the distance of the shuddha shadja above the nishada is four srutis, the rise of nishada is only through three srutis. Shadja and panchama do not under any circumstances, take the names of their respective preceeding notes. It will be remembered that gandhara could rise up to the fourth sruti of maddhayama, and become ati-tivratama 'ga'. There are four srutis between 'ma' and 'pa', but ma could rise only upto the third sruti of 'pa' and become tivra 'ma' tivratara 'ma' and tivratama 'ma'. There is no ati-tivratama 'ma'.

षड्जस्य द्वे श्रुती गृह्णन् निषादः काकली स्मृतः ।
तीव्रतरे निषादेव गेया सैव विचक्षणैः ॥

Translation.—When nishads takes two srutis of shadja, it is also called Kakali nishada. It should be sung in the place of tivratama nishada.

Observation.—Kakali is a well-known swara name in the southern music system. Kakali nishada corresponds with the tivra nishada of the Hindusthani system. Sadharana 'ga' Antar 'ga', Kaishika 'ni', and Kakali 'ni', are now universally understood to mean komal 'ga' tivra 'ga', komal 'ni', and tivra 'ni', of the Hindusthani system. The important question before us will now be what was the shuddha Thata of the Raga Tarangini? The answer will be it was no other than the Kafi Thata of our current Hindusthani music system. The shuddha 'ga' and and shuddha 'ni' of Lochana Pandita are the Hindusthani komal 'ga' and komal 'ni'. The conclusive evidence, however, on this point will be seen when we come to discuss the Thata definitions. The shuddha Thata of the Tarangini could never be our modern Bilavala Thata, because, the tivra 'ga' and tivra 'ni' necessary in the Bilawala scale are vikrita notes according to the Tarangini. Then again it will be noted that the notes 'ri' and 'dha' become komal 'ri' and komal 'dha'.

Lochana Pandita lays down the following twelve Thatas and then classifies his 'janya' ragas under them :—

(१) भैरवी	(५) केदार	(९) धनाश्री
(२) तोडी	(६) इमन	(१०) पूर्वा
(३) गौरी	(७) सारंग	(११) मुखारी
(४) कर्णाट	(८) मेघ	(१२) दीपक

These Thatas are described by the author as follows :—

(1) BHAIRAVI.

शुद्धाः सप्तस्वरा रम्या वादनीयाः प्रयत्नतः ।
तेन वादनमात्रेण भैरवी जायते शुभा ॥

Translation —The seven shuddha swaras should be carefully sung or played and the moment that is done the Thata called Bhairavi will be produced

Observation —This definition of the Bhairavi Thata will no doubt cause surprise. The Bhairavi Thata known to the student of Hindusthani Music takes komal 'ri' and komal 'dha' that of Lochana is the Kafi Thata The Bhairavi mela of the southern system takes 'ri' tivra and 'dha' komal of the Hindusthani system. Lochana evidently knew the southern practice as well. Because in the next verse he says —

अन्ये तु भैरवी रागे धैवत कोमल विदुः ।
तदशुद्ध यतस्तादृक् नाय रागाऽनुरजकः ॥

Translation —Others use a komal dhaivata in the Bhairavi raga I know, but that is incorrect . Bhairavi with a komal dhaivata will not be pleasing

(2) TODY

शुद्धाः सप्तस्वराः कार्यौ रिधौ तेषु च कोमलौ ।
तोडी सुरागिणां ज्ञेया ततो गायकनायकैः ॥

Translation —Take the seven shuddha swaras again Make 'ri' and dha komal and the resulting Thata will be Todi It should be sung as such by the singer

Observation —The Todi Thata of all ancient Sanskrit writers corresponds with our modern Bhairavi Thata of the Hindusthani system Any of our southern friends will confirm this statement The Todi Thata of the southern system is even now the same as our modern Bhairavi Thata This verse proves that the shuddha scale of Lochana was our modern kafi Thata, because the Kafi Thata could easily be converted into the Todi Thata, our modern Bhairavi by making 'ri' and 'dha', komal

(3) GOURI

एवं सति च गांधारो द्वे श्रुती मध्यमस्य चेत् ।
गृह्णाति काकली नि-स्यात्तदा गौरी प्रवर्तते ॥

Translation —If in the last mentioned Todi Thata, the note gandhara takes two srutis of maddhyama, and the note nishada becomes Kakali, the resulting Thata will be Gouri

Observation —The Gouri Thata of the ancient writers is universally admitted to correspond with our modern Bhairava Thata. Here again we have further proof to show that the Shuddha Thata of Lochana was our Kafi

(4) KARNAT.

शुद्धाः सप्त स्वरास्तेषु गांधारो मध्यमस्य चेत् ।
गृह्णाति द्वे श्रुती गीता कर्णाटी जायते तदा ॥

Translation.—If you take the shuddha swara scale of seven notes and raise gandhara therein by two srutis, the resulting Thata will be Karnat.

Observation.—The Karnat Thata will be the modern Khamaj Thata of our Hindusthani system in which all notes except the nishada are shuddha.

(5) KEDARA.

एवं सति निषादश्चेत् काकली भवतिस्फुटम् ।
वीणायां व्यक्तिमाधत्त केदारसंस्थितिस्तदा ॥

Translation.—If in the Karnat scale, the nishada becomes Kakali the vina will produce the Thata known as Kedara.

Observation.—The Kedara Thata of the Tarangani will correspond with our modern Bilawal scale.

(6) IMAN.

एवं सति च संस्थाने मध्यमः पंचमस्य चेत् ।
गृह्णाति द्वे श्रुतीं राग ईमनो जायते तदा ॥

Translation.—If in the last mentioned Kedara Thata the maddhyama takes two srutis of panchama, the resulting Thata will be Iman.

Observation.—This is exactly our modern Yaman Thata of the Hindusthani system. The only difference is that the modern Hindusthani musician uses the swara names tivra 'ga' tivra 'ni' and tivra 'ma' in place of Lochana's Tivratara 'ga' tivratara 'ni' and tivratara 'ma'.

(7) SARANG. (A)

एवं सति च गांधारः शुद्धमध्यमतां व्रजेत् ।
धश्च शुद्ध निषादः स्यात् सारंगो जायते तदा ॥

Translation.—If in the Iman Thata just described, the Ga coincides with the shuddha maddhyama and the dhaivata takes the place of the shuddha, nishada the scale produced would be the Saranga Thata.

Observation.—The Gandhara which stands in the place of shuddha 'ma' would be called ati tivratama 'ga' and the dhaivata standing in the place of shuddha nishada would be called tivratara 'dha'. In ancient music, two notes of the same denomination were not allowed to appear in the same scale. Hence the use of the atitivratama

'ga' for shuddha 'ma' The Saranga scale was to be formed from the Iman, and this last already had the tivra 'ma' in it

(8) MEGHA

घनिषादौ च शार्ङ्गस्य वर्णाऽस्य गमौ यदि ।
मवेतां रागराजन्यो मेघराग. प्रजायते ॥

Translation —In the Megha Thata the dhaivata and nishada, will be those of Saranga, and the gandhara and maddhyama will be the same as used in the Karnat Thata

Observation —The retention of dhaivata and nishada of Saranga merely means that both nishadas have to be used in the megha scale The 'ga' and 'ma' of Karnat would mean tivratara 'ga' and shuddha 'ma' practically In the Saranga Thata there were two maddhyamas (tivra and komal), but no gandhara The ati-tivratama 'ga' was only another name for Shuddha 'ma' The difference, therefore, between the Megha and Saranga scales, will be clearly seen Our modern shuddha 'dha' of the Kafi Thata does not appear in the Megha scale

(9) DHANASRI

ऋषभः कोमलो गस्तु द्वेश्रुती मध्यमस्यचेत् ।
गृह्णाति द्वे श्रुती मश्च पचमस्य विशेषतः ॥
धैवतः कोमलो निश्च षड्जस्य द्वे श्रुती यदा ।
गृह्णाति रागिणी रम्या धनाश्रीर्जायते तदा ॥

Translation —When rishabha becomes komal and gandhara takes two srutis of maddhyama, when maddhyama takes two srutis of panchama when dhaivata becomes komal and the nishada takes two srutis of the shadja, the beautiful scale known as Dhanashri is the result

Observation —This scale is the same as that of our Puriya Dhanashri It is well-known that in this Hindusthani scale, the 'ri' and 'dha' are komal, and 'ga' 'ma' and 'ni' are tivra

(10) PURVA

इमन स्वर सस्थाने निषादप्रथमां श्रुतिम् ।
गृह्णाति धैवतश्चेया पूर्वाया. स्वरसस्थिति· ॥

Translation —In the Purva thata, all the notes of the Iman thata th the exception of the Dhaivata are to be retained The dhaivata o be raised one sruti

Observation —In this scale then we have 'sa', 'ri', 'ga', 'ma', 'pa', all of the Iman Thata and komal 'ni' which will be called tivra

'dha' by Lochana. No such scale appears to be in use in the music system of Western India at present. But there is one like it in the Southern system and is known there by the name of Chitrambari.

(11) MUKHARI.

शुद्धाः सप्तस्वरास्तेषु धैवतः कोमलो भवेत् ।
वीणायां जायते शुद्धा मुखारी संस्थितिस्तदा ॥

Translation.—If in the shuddha swara scale the dhaivata becomes komal, the resulting scale will be called shuddha Mukhari, or Mukhari.

Observation.—This scale will correspond with the modern Hindusthani Asawari Thata or according to some the Jaunpuri Thata. The Southern scale answering this description would be Nata Bhairavi. There is a Mukhari scale in the Southern system also but it materially differs from Lochana's Mukhari.

(12) DEEPAKA..

The author gives no definition of this Thata. He simply says :—

सर्वैर्मिलित्वा लेख्यः ।

This shows that the *Raga Deepaka had already gone out of use.* Lochana says, if the Raga has to be revived, its features should be settled by the best living experts, evidently in a Conference.

Quaere.—What becomes of the usually told story that the raga deepaka was sung by Miya Tansen with disastrous results to himself in Akbar's Court.

The twelve *thatas of Lochana* with their *swaras may* be written in terms of the Hindusthani swara names thus.

(१) भैरवी—सा, री शुद्ध, ग कोमल, म शुद्ध, प शुद्ध, ध शुद्ध, नि कोमल ।
(२) तोडी—सा, री कोमल, ग कोमल, म शुद्ध, प शुद्ध, ध कोमल, नि कोमल ।
(३) गौरी—सा, री कोमल, ग शुद्ध, म शुद्ध, प शुद्ध, ध कोमल, नि शुद्ध ।
(४) कर्णाट—सा, री शुद्ध, ग शुद्ध, म शुद्ध, प शुद्ध, ध शुद्ध, नि कोमल ।
(५) केदार—सा, री शुद्ध, ग शुद्ध, म शुद्ध, प शुद्ध, ध शुद्ध, नि शुद्ध ।
(६) इमन—सा, री शुद्ध, ग शुद्ध, म तीव्र, प शुद्ध, ध शुद्ध, नि शुद्ध ।
(७) सारंग—सा, री शुद्ध,×म शुद्ध, & तीव्र, प शुद्ध, ×, नि कोमल & शुद्ध ।
(८) मेघ—सा, री शुद्ध, ग शुद्ध, म शुद्ध, प शुद्ध, ×, नि कोमल & शुद्ध ।
(९) पूर्वा—सा, री शुद्ध, ग शुद्ध, म तीव्र, प शुद्ध, ×, नि कोमल & शुद्ध ।
(१०) धनाश्री—सा, री कोमल, ग शुद्ध, म तीव्र, प शुद्ध, ध कोमल, नि शुद्ध ।
(११) मुखारी—सा, री शुद्ध, ग कोमल, म शुद्ध, प शुद्ध, ध कोमल, नि कोमल ।
(१२) दीपक—Nil.

The author classifies his seventy-five 'janya' ragas under these Thatas as follows :—

(१) भैरवी—भैरवी, नीलाम्बरी।

(२) तोडी—तोडी।

(३) गौरी—मालव, श्रीगौरी, चैतीगौरी, पहाडी गौरी, देशी तोडी, देशकारी, गौड, त्रिवण, मुलतानी, धनाश्री, वसन्त, भैरव, विभास, रामकली, गुर्जरी, बहुली, रेवा, भटियार, खट, मालवपंचम, जयतश्री, आसावरी, देवगांधार, सिन्धी आसावरी, गुणकरी।

(४) कर्णाट—कर्णाट, बागीश्वरी, खम्माच, सोरट, परज, मारु, जयजयवन्ती, कुकुभ, कामोद, केदार, मालवकौशिक, हिंदोल, सुघराई, अडाणा, गारा कानडा, श्रीराग।

(५) केदार—केदारनाट, आभीरनाट, खंबावती, शंकराभरण, बिहागडा, हमीर, श्याम, छायानट, भूपाली, भीमपलासी, कौशिक, मारु।

(६) इमन—इमन, शुद्धकल्याण, पूरिया, जयतकल्याण।

(७) सारंग—सारंग, पटमंजरी, बिंद्राबनी, सामन्तसारंग, बडहंस,।

(८) मेघ—मेघमल्लार, गौडसारंग, बिलावल, अल्हैया, शुद्धसूहव, देस, शुद्धनाट।

(९) धनाश्री—धनाश्री, ललित।

(१०) पूर्वी—पूर्वी।

(११) मुखारी—मुखारी।

(१२) दीपक—Nil.

It will be observed that all these janya ragas of the Tarangini are known to the Hindusthani musicians of the present day. The grantha therefore should be of the greatest historical importance to them. It is interesting to note how many of these janya ragas have changed their swaras during the Mohamedan regime. Some of the ragas seem to have retained their original Thatas even to this day. The author does not give any detailed definition of the janya ragas because I believe the work Tarangini is essentially a book on prosody and not on Music. As to the times assigned for the singing of these ragas the author says as follows :—

अथ कालेन रागसमयाः।

आद्ये प्रहरे गातव्यो भैरवो रागसत्तमः।

अरुणोदयवेलायां गेया रामकली पुनः॥

प्रातर्वेलावली गेया पूर्वाह्णे इमनोऽपि च।

पूर्वाह्णे काले गायेत् तोडीमपि मनोहराम्॥

खम्माची बराडी च गेया गायकनायकैः।

दिवा तृतीये प्रहरे गातव्यासावरी जनैः॥

कार्यो मध्यान्हसमये सारंगोऽपि च गीयते।

अपराह्णे गौरी हंसस्वरं गायेत्तु मालवम्॥

अपराह्णावसाने वा सायाह्ने सति याति वा ।
सायंकालस्तु कालों वै गौरीरागस्य भूतले ॥
निशामुखे तु कल्याणः केदारस्तु महानिशि ।
द्वितीयप्रहरे रात्रौ कर्णाटः सर्वसंमतः ॥
तृतीयप्रहरे रात्रावडानोऽपि च गीयते ।
अपराह्णेपि सौराष्ट्रः प्रभाते संगवेऽपि च ॥
पंचमो मेघसंचारे मल्लारः परिकीर्तितः ।

These times of singing throw a good deal of light on the modern classifications of the Hindusthani ragas. The following times for instance will attract particular attention of the Hindusthani Musician.

BHAIRAVA & RAMAKALI.—To be sung in the early morning.

GOURI.—To be sung in the evening.

BILAWALI.—To be sung in the first quarter of the day.

KALYAN.—To be sung in the first quarter of the night.

TODI and SUHA.—To be sung in the forenoon.

SARANG.—To be sung at midday.

KANADA.—To be sung at midnight.

ADANA.—To be sung in the third quarter of the night.

MEGHA.—To be sung in the rainy season.

Lochana has also included in the Tarangini a small chapter on Raga mixtures,

(सकलदेश साधारण गुणिगण प्रसिद्ध रागसंकराः)

which also deserves attention.

HRDAYA KOUTUKA AND HRDAYA PRAKASHA

These are two small but interesting treatises. The name of the author is Hrdaya Naraindeva. He describes himself as follows :—

" इति गडादेशनरेश श्री हृदयसाहि विरचितं हृदय कौतुकम् "

No date is given in the book by the author, but we can fix an approximate date for the author with the help of some other works. In the Hrdaya Koutuka, the swara prakarana we find is borrowed bodily from the Raga Tarangini. That means that the work was written some time after the fifteenth century. Dr. Sukthankar, late of the Archaeological Survey, India, at my request tried to ascertain the date of Hrdaya Narain and found that the last named ruler, ruled in Gada desha about the Samvat year 1724, i.e. A.D. 1660. The great importance of Hrdayesha's works lies in the way he fixes the exact places of his shuddha and vikrita swaras. He describes these in terms of the lengths of the

sounding string of his *Vina* The relative pitches of those notes therefore could be easily fixed with mathematical accuracy. Ahobala Pandita the author of the Sangeeta Parijata has also done it, but we are *not sure whether he copied from Hydaya's book or vice versa.*

We shall now proceed to the swara prakarana of Hrdaya Koutuka thus.

सत्त्वशेषश्रुति त्यक्त्वा यदा ऋषभधैवतौ ।
गीयते गुणिभिः सर्वैस्तदा तौ कोमलौ मतौ ॥
गृह्णाति मध्यमस्यापि गांधारः प्रथमां श्रुतिम् ।
यदा तदा जनैरेष तीव्र इत्यभिधीयते ॥
द्वितीयामपि चेदेव तदा तीव्रतरः स्मृत. ।
तृतीयामपि चेदेव तदा तीव्रतम. स्मृतः ॥
चतुर्थीमपि चेदेवमतितीव्रतम. स्मृत. ।
अतितीव्रतमो गस्तु सांगे परिगीयते ॥
षड्जस्य च निषादश्चेद् गृह्णाति प्रथमां श्रुतिम् ।
तदा संगीतिभिः सोऽपि तीव्र इत्यभिधीयते ॥
द्वितीयामपि चेदेव तदा तीव्रतरः स्मृत. ।
तृतीयामपि चेदेव तदा तीव्रतमः स्मृतः ॥
षड्जस्य द्वे श्रुती गृह्णन् निषाद. काकली स्मृत. ।
तीव्रतरो निषादेव गेया सा च विचक्षणैः ॥

these slokas have been taken by the author from the Raga Tarangini of Lochana and as they have already been translated, it *is not necessary to further discuss them here Hrdayesha invents a* new raga and calls it Hrdaya-rama He uses two new swaras in it, namely, tri sruti 'ma' and tri-sruti 'ni' and lays down a new Thata for the raga containing these new notes He says —

रागिणा हृदयेशेन या हृदयरमेलिता ।
उक्ता तदनुरोधेन स्थितिस्तास्तु त्रयोदशी ॥

Translation —*Hrdaya* having introduced an altogether new raga under the name of *Hrdaya-rama* has *also* added *a* new Thata to the ancient twelve

The ancient twelve Thatas he takes from the *Raga Tarangini.* *We have already gone through them and shall not repeat them* About the Deepaka Thata, the author says *रागप्रकर्णे दीपक साधन नेष्यम्.)* This shows that Deepaka Raga was not sung also in his time .Th follows a fanciful division of Ragas into four classes

एतासु सकला रागा जायन्ते वादनक्रमाः ।
ब्राह्मणाः क्षत्रिया वैश्याः शूद्रास्ते स्युःश्चतुर्विधाः ॥
संपूर्णा ब्राह्मणाः प्रोक्ताः क्षत्रियाः षाडवा मताः ॥
औडवाः कथिता वैश्याः शूद्रास्तदितरे क्वचित् ॥

The janya ragas are fully described in the Hrdaya koutuka. The sloka defining a raga, gives not only the *'varjyavarjya'* swaras of it, but also *gives* its swara-swarupa.

Thus.

गमौ पनी धनी सोरिः सनिसा रिगमाः पधौ ।
मपौ सरी सनिधपा मपौ गम–गमा रिसौ ।
हंमीररागराजन्यः संपूर्णः कथितो बुधैः ॥
गमौधसौ सधपगा रिगौ रिसधपा धसौ ।
रिगौ रिगरिसाश्चैव भूपाली कथितौडवी ॥
गमौ पनी सानिधपा मगौ मरिसगाश्च मः ।
खंबावती च संपूर्णा कथ्यते गायकोत्तमैः ॥
सरी गमौ पधनिसा रिसौ धपगमा रिसौ ।
पधौ निसौ च संपूर्णा प्रोक्ता वेलावली बुधैः ॥

This is really a very useful method of describing a raga. I have made use of it in one of my publications on the Hnidusthani ragas.

HRDAYA—PRAKASHA.

This is another work by the same author. It is much more interesting than the Koutuka. In this book the author describes the position of the shuddha and vikrita swaras in terms of the lengths of the sounding strings of the Vina. The classification of the ragas also is instructive and more scientific. Ahobala in his Sangeet Parijata also, describes his swaras in terms of the lengths of the sounding string as we shall see hereafter. But we do not know whether he got that idea from Hrdaya's book. Some scholars on the contrary suspect that Hrdaya took the idea from Ahobala. There is no reliable evidence on the point but there are two facts which may lend some colour to the last mentioned suspicion. Hrdaya in his Koutuka omits to fix the positions of his shuddha and vikrita swaras in terms of the lengths of the strings. And secondly, Sangeeta Parijata is a much more elaborate work than the Hrdaya Prakasha. All will depend therefore upon the question whether or not the Parijat was written before the Prakasha.

We shall now consider some of the leading features of the Prakasha. The author begins by saying :—

संगीतशास्त्रसर्वस्वमसाधारणगोचरम् ।
वीणादौ रागमेलादिहृदयेशेन कथ्यते ॥
आकरे बहवो मेला द्वादशेहोपयोगिनः ।
मेलः स्वरसमूहः स्याद्रागव्यञ्जनशक्तिमान् ॥

Translation —The secrets of the science of music being intelligible only to the specially gifted, Hrdaya proposes to explain them with the help of the Vina There are innumerable melas or Thatas, described in the Ocean of Music but only twelve of these are useful here A Thata is a collection of notes capable of producing ragas

Observation —Ahobala Pandita has mentioned thousands of Thatas in his Sangeeta Parijata We wonder whether the word "akara" is cunningly used to hint at those

स्वर प्रकरणम् ॥

स्वराश्च षड्जऋषभौ गांधारो मध्यमस्तथा ।
पञ्चमो धैवतश्चैव निषाद इति सप्त ते ॥
द्विश्रुतिर्गोनिषादश्च प्रत्येकं त्रिश्रुतौ रिधौ ।
चतुःश्रुतिसमायुक्ताः पूर्ववत्समपाः स्मृताः ।
स्वांत्यश्रुतिस्थिता शुद्धाः स्युरन्ये विकृताः स्वराः ॥

All this represents the universally accepted view, and we need hardly discuss it

श्रुतिमाधादि तुर्यांताः स्वरा ये चोर्ध्ववर्तिनः ।
तीव्रस्तीव्रतरस्तीव्रतमा भवति हि क्रमात् ॥
स्वोपांत्यश्रुतिवर्ती तु कोमलः परिकीर्तितः ।

Translation —The vikrita swaras are produced when the shuddha swaras rise through one, two, three or four srutis When the shuddha note rises one sruti, it becomes, tivra, when it rises two srutis it becomes tivratara, when it rises three srutis it becomes tivratama, when it is lowered one sruti, it becomes Komal

Observation —The process is the same as described in the Koutuka It is this process which distinguishes the northern music system from the southern In the southern system the shuddha swara is the lowest position of the note and the vikritas are its higher positions In the northern system, we have the vikritas on both sides of the shuddha note In other words the shuddha note occupies the central position

निस्तीव्रतरसञ्ज्ञस्तु काकलीत्यपि कथ्यते ॥
सपयोर्यदि गृह्णातिनिसरिस्थः श्रुतीर्निमौ ।
मृदुमो मृदुपश्चेति तदान्ये गपयोर्मते ॥

Translation.—The note tivratara nishada is also called Kakali; when the notes 'ni' and 'ma' take the three srutis of 'sa' and 'pa' respectively, they are called mridu 'sa' and mridu 'pa'.

The स्वर संज्ञा प्रकरण practically ends here. The author next explains the terms vadi, samvadi, anuvadi, and vivadi.

प्रयोगो बहुधा यस्य स स्याद्वादी नृपोपमः ।
ययोर्भवेयुः श्रुतयो द्वादशाष्टाथवान्तरे ॥
मिथः संवादिनौ तौ स्तौ राज्ञः सचिवसन्निभौ ।
विवादी रक्तिविच्छेदी शत्रुतुल्यः स कीर्तितः ॥
अनुवादी तटस्थो यः किंकरप्रतिमः स्वरः ।
सपौ रिधौ मध्यमसौ निगौ संवादिनो मिथः ॥

Translation.—The note most frequently used in a raga, which it like the king of the raga, is called 'Vadi'. Samvadi stands at a distance of eight or twelve srutis from the vadi. It is like a minister to the raja of the raga. Vivadi destroys the beauty of the raga and is therefore called the enemy. Anuvadi is neutral, and is compared to the servant. The following pairs of notes are samvadis to each other. Sa, pa; ri, dha; ga, ni; and ma, sa;

Then we come to an important point and it is this:

द्वौ त्रयो वापि चत्वारः स्युस्ताना रंजकस्वराः ।
पंचाद्यैरथ रागः स त्रिधा पंचभिरौडुवः ॥
षड्भिः स्वरैः षाडवः स्यात्संपूर्णः सप्तभिः स्वरैः ॥

Translation.—Combinations of two or three or four notes, will be only pleasing 'tan's, but no ragas. The ragas must have five six or seven notes. A raga with five notes, is 'odava', one with six is 'shadava' and one with seven is 'sampurna'.

Observation.—It is an accepted rule of Indian music that a raga should have at least five notes पंचोनेभ्यः स्वरेभ्यस्च नस्य । द्रागस्य संभवः । A tana may have any number of swaras.

Then follows the most important portion of the work, namely the location of swaras on the sounding wire of the vina. It will be useful to have the sruti swara chart before you in order to follow the details of the next few slokas.

ध्वन्यवच्छिन्नवीणायांमध्ये तारकसंस्थितिः ।
त्र्यंशितस्याद्यभागांते मध्यमस्य च पंचमम् ॥

Translation —Exactly in the centre of the wire (that portion of the wire which is capable of producing sound) will stand the tara shadja If the whole wire is divided into three equal parts, the panchama of the middle octave will stand at the end of the first part

Observation —Supposing the whole length of the speaking wire of the vina to be thirty-six inches, then the Tara 'sa' will be eighteen inches from either end, the pancham will be 12 ins from the meru, and 24 ins from the 'ghodi' (bridge) The whole length will produce the *fundamental note or mandra 'sa'.*

मध्यम षड्जयोर्गंतु सपयोर्मध्यमानयेत् ।
त्र्यंशितस्य तयोर्मध्यस्याद्यांशान्ते तथर्षभम् ॥

Translation —The maddhyama of the middle octave will be exactly between the two shadjas The shuddha gandhara will stand *exactly between 'sa' and 'pa' If the distance between* 'sa and pa be divided into three equal parts, then the snuddha rishabah, will stand at the *end* of the first part.

Observation —*In the vina wire of thirty-six inches, therefore, the* maddhyama of the middle octave will be at a distance of nine inches *from the meru, and twenty-seven inches from the lower bridge or ghodi* The shuddha gandhara will stand exactly between 'sa' and pa', that is to say, it will be six inches from the meru and thirty-inches from the ghodi. If the distance between 'sa' and 'pa', (which is twelve inches) be divided into three parts, the shuddha risbabha will be at the end of the first part It will, therefore, be four inches distant from the meru and thirty-two inches from the "ghodi."

तथैव धैवतं मध्ये सपयो स्थापयेद्बुधः ।
तत्र भागद्वयं त्यक्त्वा निषादाख्य स्वर न्यसेत् ॥

Translation —The shuddha dhaivata ought to be placed in the interval between 'pa' and tara 'sa' If the distance between the 'pa' and tara 'sa', be divided into three parts, the shuddha nishad will come at the *end of the second part*

Observation —The description of the place of the dhaivata, has *led to some hot controversy among the scholars No doubt the des*cription at first sight appears somewhat loose, but the author furnishes the reader later on with the key to the difficulty *He says.*

स्वर स्थान विहीनत्वा मार्गोऽयं बोधितो मया ।
स्वरमण्डिता स्थान स्वरस्थापनकारणम् ॥
षड्जपञ्चमभावेन षड्जेभ्यो स्वरबुधैः ॥

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Observation.—It is an accepted rule of Indian music that a raga should have at least five notes पंचोनेभ्यः स्वरेभ्यश्च नस्य। द्रागस्य संभवः। A tana may have any number of swaras.

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मध्यम षड्जयोर्गतु सपयोर्मध्यमानयेत् ।
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तथैव धैवतं मध्ये सपयोः स्थापयेद्बुधः ।
तत्र भागद्वयं त्यक्त्वा निषादाख्य स्वर नयेत् ॥

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स्वर ज्ञान विहीनेभ्यो मार्गोऽयं बोधितो मया ।
स्वरसंवादिता ज्ञानं स्वरस्थापनकारणम् ॥
षड्जपञ्चमभावेन षड्जेमेया. स्वराबुधैः ॥

Translation.—I have adopted this simple method of locating the swaras in the interests of those who have not a good swara-dnyana. The exact places of the swaras, have to be fixed with the help of स्वर सम्वादिता ज्ञान. It must always be remembered that the swaras in my shadja grama (shuddha scale) must stand in *samvadi* relationship. He means to say that the swaras in the "uttarang' of the scale must be the samvadis or the fifths of those in the purvanga.)

Observation.—This explanation of the author easily solves the difficulty. The shuddha dhaivata which is to be placed between panchama and tara 'sa' will have to be so placed that it will stand as a proper samvadi or the fifth to the shuddha rishabha. The shuddha rishabha has already been definitely fixed and so there will be no difficulty in fixing the position of the shuddha dhaivata. The reason why the author could not fix the exact length of the wire for the dhaivata appears to be that he could not obtain a convenient division of the string for that swara. We see that he has adopted the simplest way of dividing the wire into two or three parts. Such a division would not have given him the right place of the shuddha dhaivata. He knew that his reader could easily determine the position of the dhaivata with the help of the shuddha rishabha, dhaivata being the samvadi of the rishabha.

The shuddha scale of Lochana and Hrdaya may be correctly expressed in terms of the lengths of the speaking wire and in the number of comparative vibrations as follows.

Note	Length of the wire.	Comparative vibrations.
sa	36	240
ri	32	270
ga	30	288
ma	27	320
pa	24	360
dha	21½	405
ni	20	432
sa	18	480

This is exactly the modern Kafi Thata of the Hindusthani musicians. The author of Koutuka and Prakasha has laid the whole of the Indian Music loving world under obligation to him for this clear exposition of the scale. As I said, however, the great question remains whether he copied all this from the Sangeet Parijata of Ahobala Pandit. The Parijata is a much more elaborate treatise and strikes the reader as an older treatise than the Prakasha. But until, some conclusive evidence is forthcoming on the point, we may reserve our judgement.

daya deals with his vikrita swaras in the following verses —

मागत्रयोदिते मध्ये मेरो कगमसंज्ञिन:।
मागद्वयोत्तरं मेरोः कुर्यात् कोमलरिस्वरम् ॥
मेरुधैवतयोर्मध्ये तीव्रगांधारमाचरेत् ।
भागत्रयविशिष्टेऽस्मिन् तीव्रगांधारषड्जयोः ॥
पूर्वभागोत्तरं मध्ये म तीव्रतरमाचरेत् ।
भागत्रयान्विते मध्ये पंचमोत्तरषड्जयोः ॥
कोमलो धैवतः स्थाप्य पूर्वभागे मनीषिभि ।
तथैव धसयोर्मध्ये भागत्रयसमन्विते ।
पूर्वभागद्वयादूर्ध्वं निषाद तीव्रमाचरेत् ॥

Translation —If the distance between the meru and the shuddha rishabha be divided into three parts the komal ri will fall at the end of the second part The tivra gandhara will come exactly between the meru and the shuddha dhaivata If the distance between the tivra ga and tara sa be divided into three equal parts, the tivratara ma will appear at the end of the first part If the distance between pa and tara sa be divided into three parts, the komal dhaivata will stand at the end of the first part If the distance between the dhaivata and the tara sa is divided into three parts, the tivra nishada will come at the end of the second part

Observation —The placing of the shuddha swaras being satisfactorily effected by the author, it is needless to work out the exact places of his five vikrita swaras here It is a purely mathematical calculation

Hrdaya accepts the twelve Thatas of the Raga Tarangini and adds his own Hrdayarama to them But he arranges the Thatas in different groups according to the vikrita swaras they contain His classification is as follows —

Group No

(1) शुद्धमेल .... मेल नाम (1) भैरवी
(2) एक विकृतौ द्वौ मेलौ ।
(a) गांधारैकस्तीव्रतर.
(b) धैवतैककोमलः । (2) कर्णाट
(3) द्विविकृतौ द्वौ मेलौ. । (3) मुखारी
(a) कोमलर्षभधैवतौ
(b) तीव्रगांधारनिषादौ (4) तोडी,
(4) त्रिविकृतास्त्रयो मेला । (5) केदार

(a) गांधारमध्यमनिषादानां तीव्रतरत्वे ।
(6) इमनः

(b) गांधार धैवतनिषादानां तीव्रतरत्वे ।
(7) मेघ

(c) गांधारमध्यमानिषादानां तीव्रतरत्वे ।
(8) हृदयरमा

(5) चतुर्विकृतास्त्रयो मेलाः ।
(a) तत्र ऋषभधैवतयोः कोमलत्वे
गांधारनिषादयो स्तीव्रतरत्वे। (9) गौरी
(b) गांधारस्यातितीव्रतमत्वे, मध्य-
मधैवतयोस्तीव्रतरत्वे, निषाद-
स्यकाकलीत्वे । (10) सारंग
(c) गांधार धैवतमध्यमानां तीव्र-
तरत्वे, निषादस्यकाकलित्वे। (11) पूर्वा

(6) पंचविकृत एक मेलः ।
गमौ तीव्रतरौ यत्र रिधौ कोमलसंज्ञकौ ।
निषादः काकलीः पूर्णा धनाश्रीस्तत्र कीर्तिता ॥
(12) धनाश्री ।

दीपक......................Omitted

The author then classifies his janya ragas, under the groups according to their vikritas. In describing the lakshana (distinguishing feature) of each raga, he adds a short string of notes, something like the aroha-avaroha-swarup of the raga which is really very interesting. I have already said that in my Abhinava-raga-manjari, I have imitated this method of raga definition. The manjari deals with the modern Hindusthani ragas and naturally follows the modern raga rules. The Janya ragas dealt with in the Prakasha, are the same as those given in the Hrdaya Koutuka.

THE SANGEETA PARIJATA

The next treatise we discuss is the Sangita Parijata of Ahobala. It is one of the most remarkable and popular works dealing with the northern or Hindustani system of music. It is a printed book now and a copy of it can be had anywhere at a very small cost. It is the opinion of some of our scholars that Ahobala was originally a southern pandit,

but may subsequently have come to northern India, and a copy [illegible] there. We shall not dispute the author's place of birth here. There is no doubt we find in the Sangit Parijata several Ragas which [illegible] are common in the southern system of Music and which are not [illegible] in the Northern [illegible]. The system of Music however as expounded in the book, is undoubtedly the northern. There is no direct evidence to show when Parijata was written. But there is [illegible] internal evidence to prove that it must have been written about the latter half of the seventeenth century. Sir W. Ouseley in his Oriental Collections, Vol. I says that Sangita Parijata was translated into Persian by Pandit Dinanath, son of Basudeo in the year 1724 A. D. I have myself seen a copy of the Persian translation in the [illegible] State Library. The copy bears the seal of the [illegible] Mahomed Shah's library. We know that Mahomed Shah ascended the throne of Delhi in the year 1719 A. D. Parijata is freely quoted by Bhava Bhatta Pandit in his well known work Sangita Anupa Vilasa. Bhava Bhatta's father, was in the service of the Emperor Shah Jehan. Bhava Bhatta himself was in the service of Rana Anupa Singh of Bikaner who was a contemporary of Aurangzeb. There is reason to believe that Ahobala had some acquaintance with the famous southern treatise Raga Vibodha written by Somanatha in 1610 A. D. These facts would go to prove that the Sangita Parijata was written somewhere in the latter half of the 17th Century.

Like all other Sanskrit writers preceding him, Ahobala accepts the division of the scale into twenty-two Srutis, to which he gives the well-known ancient names, तीव्रा कुमुद्वती etc. The principle of locating the Shuddha Swaras on the srutis is the same as that followed by the ancient writers. It is this:

चतुश्चतुश्चतुश्चैव षड्जमध्यमपंचमाः ।
द्वे द्वे निषादगांधारौ त्रिस्त्रिर्ऋषभधैवतौ ॥

The Shuddha swara was represented always by the last Sruti. In other words, the usual rule [illegible] was faithfully followed by him. It will be seen presently that the Shuddha scale of the Sangita Parijata is identical with that of the Hridaya Prakasha. It corresponds with our modern *Kafi scale*. *Ahobala* describes his Vikrita Swaras in the following verses:

स्वरोऽग्रिमश्रुतिं याति तीव्रसंज्ञो भवेत्तदा ।
स्वरोऽग्रिमश्रुती याति तदा तीव्रतरो भवेत् ॥
स्वरोऽग्रिमश्रुतीर्याति तर्हि तीव्रतमो भवेत् ।

चतस्रः श्रुतयो यस्मिन्नाधिकाः स्युर्यदा स्वरः ॥
अतितीव्रतमाख्यां च प्राप्नोतीति जगुर्बुधाः ।
स्वरः पश्चान्निवृत्तः श्चेत्कोमलादिभिरीरितः ॥
एकश्रुतिपरित्यागात् स्वरः कोमलसंज्ञकः ।
* श्रुतिद्वयपरित्यागात्पूर्वशब्देन भण्यते ॥

Translation. When a note rises one sruti, it becomes tivra; when it rises two Srutis, it becomes tivra-tara; when it goes up three Srutis, it is called tivra-tama, and when it goes up four Srutis, it is called Ati-tivra-tama. When a note goes back (is lowered by one sruti) it becomes komala. When it is lowered two srutis, it becomes 'purva'.

Observation. This was also the process, described in the three treatises we discussed. Lochana and Hrdaya say nothing about the 'purva' note.

Some of the ancient Sanskrit writers, give fanciful distinctions between the Sruti and the swara. But the distinction between them pointed out by Pandit *Ahobala* is by far the most reasonable. Ahobala says :—

श्रुतयः स्युः स्वराभिन्नाः श्रावणत्वेन हेतुना ।
अहिकुण्डलिवत्तत्र भेदोक्तिः शास्त्रसंमता ॥
सर्वाश्च श्रुतयस्तत्तद्रागेषु स्वरतां गताः ।
रागाहेतुत्व एतासां श्रुति संज्ञैव संमता ॥

Translation. There is no *essential* difference between the Sruti and the Swara. Both are sounds *capable of being heard*. According to the Shastras, the distinction between them is something like that which exists between the snake and its coil, or between gold and the ornaments made out of it. *All Srutis are capable of being used as swaras* in the various *Ragas*. Sounds actually used in the Raga become swaras for that Raga. Those not so used remain srutis only.

Observation. He means to say that the swaras of one raga will again become srutis only when the Raga is changed, and a different set of Srutis is selected *as Swaras for the new raga*. The selection is always to be made from *the twenty-two* srutis into which the scale is divided. The following chart will show the places and the names of the different Shuddha and *Vikrita* swaras *of the Sangita Parijata.*

श्रुति नाम	शुद्ध स्वर स्थान	कोमल विकृत स्वरस्थान	तीव्रविकृतस्वरस्थान	
१ तीव्रा			तीव्र निषाद	
२ कुमुद्वती			तीव्रतर निषाद	
३ मन्दा			तीव्रतम निषाद	
४ छन्दोवती	षड्ज			
५ दयावती		पूर्व ऋषभ		
६ रञ्जनी		कोमल ऋषभ		
७ रक्तिका	ऋषभ	पूर्व गांधार		
८ रौद्री		कोमल गांधार	तीव्र ऋषभ	
९ क्रोधी	गांधार		तीव्रतर ऋषभ	
१० वज्रिका			तीव्र गांधार	
११ प्रसारिणी			तीव्रतर गांधार	
१२ प्रीति			तीव्रतम गांधार	
१३ मार्जनी	मध्यम		अतितीव्रतम गांधार	
१४ क्षिती			तीव्र मध्यम	
१५ रक्ता			तीव्रतर मध्यम	
१६ संदीपिनी			तीव्रतम मध्यम	
१७ आलापिनी	पंचम			
१८ मदन्ती		पूर्व धैवत		
१९ रोहिणी		कोमल धैवत		
२० रम्या	धैवत	पूर्व निषाद		
२१ उग्रा		कोमल निषाद	तीव्र धैवत	
२२ क्षोभिणी	निषाद		तीव्रतर धैवत	
१ तीव्रा				
	७ शुद्ध स्वराः	८ कोमल विकृता	१४ तीव्र विकृता	२९ स्वराः

It may be pointed out here that although Ahobala Pandit used twenty-nine swara names in his music system, in the descriptions of his ragas, he never used more than twelve swaras. A reference to the chart will show that many of his vikritas are only different names for the same sounds. He does not make any secret of it. He tells his readers what notes he would not use in his ragas. Thus.

पूर्वकोमलतीव्रश्च तथा तीव्रतरोऽपि च ।
अतितीव्रतमोऽपि च सर्वे रागा उदीरिताः ॥
रिंच पूर्व तथा तीव्र तीव्रतर च गस्वरम् ।

तीव्रतमं तथा गं च मं च तीव्रं स्वरं तथा ॥
मं च तीव्रतमं धं च पूर्वाख्यं तीव्रसंज्ञितम् ।
तीव्रतरं निषादं च तीव्रतमं च निस्वरम् ॥
इत्येतांश्च दश त्यक्त्वा रागलक्षणमीरितम् ।

Translation.—In giving the 'laksanas' (definitions) of the Ragas, I have omitted the use of the following ten swaras :

(१) पूर्व री (२) तीव्र री (३) तीव्रतर ग (४) तीव्रतम ग (५) तीव्र म (६) तीव्रतम म (७) पूर्व ध (८) तीव्र ध (९) तीव्रतर नि (१०) तीव्रतम नि ।

About the remaining twelve vikritas, he further points out.

ऋषभः शुद्ध एवासौ पूर्व गांधार उच्यते ।
गांधार शुद्ध एवासौ रिस्तीव्रतर इष्यते ॥
अतितीव्रतमो गः स्यान्मध्यमः शुद्ध एवहि ।
धैवतः शुद्ध एवासौ निषादः पूर्वसंज्ञकः ॥
निषादः शुद्ध एवासौ धस्तीव्रतर इष्यते ॥

Translation.—Shuddha 'ri' is the same as Purva gandhara Shuddha gandhara is no other than tivra-tara 'ri'; ati-tivra-tama 'ga' is shuddha maddhyama itself. Shuddha dhaivat is purva nishada. Shuddha nishada and tivra-tara-dhaivata are one and the same.

Observation.—He means to say that these ten swara names disclose only five Swaras. Thus we have only seven vikritas left out of the twenty-two. Out of these seven again, Komal 'ga' and Komal 'ni' will have to go out. They correspond with tivra 'ri' and tivra 'dha' respectively which sounds are not to be used in any of the ragas at all. *This leaves only five real vikritas. Ahobala thus uses twelve* notes only in his raga descriptions.

The method of placing the shuddha and vikrita notes on the sounding wire of the Vina, or in other words the method of expressing the positions of the shuddha and Vikrita Swaras in terms of the lengths of the speaking wire of the vina is exactly the same as that used by Hrdaya in his Hrdaya Prakasha. We can therefore, safely say that the shuddha and vikrita swaras of Ahobala, are identically the same as those of Hrdaya with this exception that Hrdaya uses tivara-tara 'ga', tivra-tara 'ni' instead of Ahobala's tivra 'ga' and tivra 'ni'. The verses in which Ahobala describes the placing of his shuddha and vikrita notes are as under :—

ध्यन्यवच्छिन्नवीणायां मध्ये तारकसःस्थितः ।
उभयोः षड्जयोर्मध्ये मध्यमं स्वरमाचरेत् ॥
त्रिभागात्मकवीणायां पंचमः स्यात्तदग्रिमे ।

मपयोः पूर्वभागे च स्थापनीयोऽस्य रिस्वरः ॥
षड्जपञ्चमयोर्मध्ये गांधारस्य स्थितिर्भवेत् ।
मपयोर्मध्यदेशे तु धैवत स्वरमाचरेत् ॥
तथाशुद्धपमत्याग निषादस्य स्थितिर्भवेत् ॥
इति शुद्धस्वराः ।

Then follow verses describing the Vikrita Swaras We need not go into those here All this is found in the Hrdaya Prakasha, which we have already considered The shuddha and Vikrita Swaras of the Sangita Parijata may be expressed in comparative vibrational values thus

'sa' 240, 'ri' 270, 'ga' 288, 'ma' 320, pa 360, 'dha' 405 'ni' 432, 'ga' 480, Komal 'ri' 254 2|17, tivra 'ga' 301 17|43, Tivra 'ma' 337½, komal 'dha' 381 3|7, tivra 'ni' (301 17|43 X 3|2)

Ahobala does not classify his ragas under any particular Thatas, but his reference to some Thata names here and there is enough to prove that in his time, the method of classifying Ragas under Thatas was common He describes about 122 Ragas in the Parijata In the raga description he mentions in each case the note used in the raga, the aroha and avaroha the Graha and Nyasa and also the Murchana The Murchana in the Parijata is nothing more than the first 'tana' of the 'swara-karana' given under each Raga We shall speak of the Murchana when we examine Srinivasa Pandita's work Raga Tatwa Vibodha Sri Nivasa was a faithful follower of Ahobala

The following Shlokas will give the reader a clear idea as to how Ahobala defines his Ragas in the Sangit Parijata,

शुद्धमेलोद्भवः पूर्णो धैवतादिकमूर्छनः ।
आरोहे गनिवर्ज्यः स्यादाग सैंधवनामकः ॥
आम्रेडितस्वरैर्युक्तः स्फुरितेन च शोभितः ॥
इति सैंधवः
धगारिमपपधधा । गनिधधपमपमागग
रिमा । धमरिममगरिगरिपमगरि । निनिध
मपमगरि । पपमगागगगरिस ॥
इति स्वरकरणम् ॥
आरोहे रिधहीनास्यात्पूर्णाशुद्धस्वरैर्युता ।
गांधारस्वरपूर्वा स्याद्धनाश्रीर्मध्यमन्तिका ॥
इति धनाश्रीः
गमपनिध । रिनिनिधपम । गमपमगरिस ।

five it is called 'ouduva'. The 'mela' has thus three varieties, or forms. Vikrita swaras also enter the construction of the Mela.

शुद्धसंपूर्णमेलस्य भेद एक उदाहृतः ।
तेत्रैकैकस्वरत्यागात् षाढवः षड्विधो मतः ॥
पंचाधिकदशत्वं हि स्वरद्वयवियोगतः ।

Translation.—*Shuddha sampurna mela has only one form. With one note omitted the 'mela' assumes six forms. With two notes omitted, it has fifteen varieties or forms.*

Observation.—By dropping ni, dha, pa, ma, ga, re, one at a time, we get six 'shadava' varieties, and by dropping ni, dha; ni, pa; ni, ma; ni, ga; ni, re; dha, pa; dha, ma; dha, ga; dha, ri; pa, ma; etc., two at a time, we get fifteen 'ouduva' varieties.

A Raga is derived from the 'Mela' but has 'aroha' and 'avaroha'. Melas become Ragas themselves, as soon as you give them 'aroha' and 'avaroha'. By applying the principle of 'odavashadava-sampurna' to these arohas and Avarohas we can obtain 484 ragas from each Sampurna Mela. This is in fact the principle on which the Raga system of the Karnatic music is based.

We shall now briefly consider the function of the 'Murchhana' which seems to have played an important part in the production of the Raga. Ancient writers define Murchhana as follows :—

क्रमात्स्वराणां सप्तानामारोहश्चावरोहणम् ।
मूर्छनेत्युच्यते ग्रामद्वये ताः सप्त सप्त च ॥
रत्नाकरे ॥

In the time of Ahobala and Sri Nivasa, however, the definition seems to have undergone a slight modification. These authors define 'Murchhana' thus :—

आरोहश्चावरोहश्च स्वराणां जायते यदा ।
तां मूर्छनां तदा लोक आहुर्ग्रामाश्रयां बुधाः ॥
सप्तसंख्यायुतास्ताः स्युस्तासांनामानि वच्म्यहम् ।
तत्र तूत्तरमंद्रास्यात् षड्जपूर्वकसंभवा ॥
द्वितीया रजनी प्रोक्ता निषादस्वरपूर्विका ।
धैवतादिस्वरोम्द्भूता तृतीया चोत्तरायता ॥

× × × ×

आरोहश्चावरोहश्च तथैव विकृतेष्वपि ।

मध्यषड्ज ममाम्य तद्र्पोरवरमानजन् ।
पूर्वैकैकस्वर त्यक्त्वाममारोहादिक्रमताम् ॥
शुद्धासु यानि नामानि तान्येव विरतेष्वपि ।
तथारोहणपूर्वस्य भेदा ज्ञेया मर्नीषिभि: ॥

The original 'Murchhana' names were retained for those murchhanas which took all the seven notes There was only one 'grama' in use in the time of these writers Ahobala distinctly says —

अथ ग्रामास्त्रय: प्रोक्ता स्वरसंदोहरूपिण ।
षड्जमध्यमगांधारमज्ञाभिस्त समन्विता. ॥
मूर्छनाधारभूतास्ते षड्जग्रामाधिपूत्तम ।
गगा ग्रमद्रयलभ्य: इ० इ० पारिजाते ॥
गांधारमध्यमग्रामात्रिप्रयोजनकौ मतौ ।
गांधारमध्यम ग्रामौ यदि भ्रांत्या प्रकल्पितौ ।
तर्हि तल्लक्षण प्रोक्तमर्धोगीरसमानत. ॥

In the music systems of Ahobala and Sri Nivasa the Mela or Thata was merely a series of notes capable of producing "Ragas".

मेल: स्वरसमूह: स्याद्रागव्यंजनशक्तिमान् ।

Mela assumed three different forms namely "odava" "shadava" and "sampurna," because it had to produce three definite kinds of ragas The definition of the Mela says nothing of the Aroha and the Avaroha It was the 'murchhana' which brought these into the Mela. A raga necessarily required the aroha and the avaroha. Hence the presence of the murchhana was absolutely necessary for the production of the raga In fact it stood midway between the mela and the raga. The mela remaining the same, it was quite possible to obtain different Ragas by a mere change of the 'murchhana'. Sri Nivasa says —

षाडवेषु च पूर्णेषु मेलेषु [illegible] च ।
आरोहे चावरोहे च [illegible] ।
मूर्छनाभेदसंपन्ना [illegible] ।
स्वरस्थिता: [illegible] ।
रागा [illegible] ।

These slokas mention various ways of producing Ragas from a Mela of given Swaras The practical importance of the murchhana in the actual singing of a Raga will be more clearly understood if we examine one or two raga definitions of Srinivasa. But before we do it, it will be useful to know how a raga was sung in the time of the author The author says.—

आदावुद्गृह्यते येन स तानोद्ग्राहसंज्ञकः ।
आद्यंतयोश्चानियमस्ताने यत्र प्रजायते ॥
स्थायी तानः स विज्ञेयो लक्ष्यलक्षणकोविदैः ।
संचारी तु स विज्ञेयः स्थाय्यारोहविमिश्रितः ॥
यत्र रागस्य विश्रांतिः समाप्तिद्योतको हि सः ॥

Every Raga had four parts, namely 'udgraha' 'sthayi' 'sanchari', and 'muktayi'. 'Udgraha' was the first part with which the raga 'alapa' was commenced. We shall now examine one or two raga definitions :—

शुद्धमेलोद्भवः पूर्णो धैवतादिकमूर्छनः ।
आरोहे गनिवर्ज्यः स्याद्रागः सैंधवनामकः ॥

Translation.—The raga "Saindhava" is produced from the shuddha thata. Its murchhana is Dhaivata and it drops the notes gandhara and nishada in the Aroha.

Observation.—What is the function of the Murchhana here, we ask? The answer will be found in the swara-karana given under the definition of the raga. It runs as follows :—

मपम गरिस निधधस । इत्युद्ग्राहः ।
धसरि इ० इ०

(This is really the 'murchhana' of dhaivata)

धसरिममगगिरिपिप्पमगरिरिनीधपमगरिरिगरि
सनिध धस । इति स्थायी ।

Then comes the third portion of the 'alapa' called 'sanchari', and last comes the 'muktayi'. This shows that in singing a raga practically the murchhana was nothing more than the first member of the Raga alapa. We shall take another example.

आरोहे रिधहीना स्यात्पूर्णा शुद्धस्वरैर्युता ।
गांधारस्वरपूर्वा स्याद्धनाश्रीर्मध्यमान्तका ॥

Translation.—The Raga "Dhanasri" is produced from the shuddha swara thata. It drops 'ri' and 'dha' in the 'aroha' its murchhana is "gandharadika". The 'nyasa' or ending note is maddhyama.

Illustration ग म प नि स । रि स नि ध प म । ग म प म ग रि स । ग म प नि प नि स रि स नि ध प म । ग म प म प म ग म ग रि स । ग म ग म प नि प नि स ग स म ।

To sum up then, the Mela first laid down the right swaras with the right 'varjya-avarjya' rule *for the raga intended to be sung.* The

'Murchhana' added the necessary aroha and avaroha, and thus produced the actual raga. The 'alapa' invariably started with the 'murchhana' determining the name of the Raga.

Later on it appears, the distinction between the mela and the Murchhana gradually disappeared and there was no restriction observed as to the 'udgraha' or the start. Murchhana then merely meant perhaps the Aroha and Avaroha of the raga and it always started from the shadja. In the Southern music system, even now, murchhana merely means the aroha and avaroha and nothing more. Its starting point is always the same as that of the षड्ज Mela, which therefore coincides with it. In the northern or Hindusthani system of the present day, the term murchhana has lost all its ancient significance. The murchhana coinciding with the mela became indistinguishable from it. The mela directly produces the raga by the process of aroha and avaroha, strangely enough some of our modern Mahomedan professional artists are known to use the term in the sense of a kind of 'gamaka' too. It will not be necessary to go into the raga-adhyaya of the Raga Tatva Vibodh, because there the author borrows the whole of his material from the Sangita Parijata. It is noteworthy that in the time of all these three or four authors that we discussed all music was based on the well-known twelve notes only. Sri Nivas emphatically disallows the use of the remaining ten srutis in the composition of the melas. He says:—

श्रुतयो द्वादशैवात्र स्वरस्थानतयोदिताः ।
तथांतरान्तरिताः सर्वा अस्वरस्थानतयोदिताः ॥
न श्रुतिभ्यस्स्वरोत्पत्तिस्ततो ग्राममेलजात् ।
पुनोद्ग्राहमुजो रागान्कल्पयंतु मनस्विनः ॥

There were in his time it appears some Pandits, who talked of admitting twenty-four srutis into the scale, and with reference to them he says:—

चतुर्भिस्तौ मगौ प्रोक्तौ गनौ द्वाभ्यां त्रिभिः स्थितौ ।
चतुर्भिः पमधा युक्ता एव श्रुतिविनिर्णयः ॥
अन्यांश्च विद्वान् कुर्यात् श्रुतिभेदविभागतः ।
मन्यमानाभिधार्थं शास्त्रबोधपरैर्भवेत् ॥
एवं भेदमयपक्षस्थानमेलसमुद्भवाः ।
अनंता अपि रागाः स्युर्गमकादिभेदतः ॥

He has no quarrel with these theories, but in his own system he never allowed more than twelve srutis in the composition of his melas as Swaras. He probably allowed the other srutis to come in occasionally as graces or ornamental Swaras in special cases.

आदावुद्गृह्यते येन स तानोद्ग्राहसंज्ञकः
आद्यंतयोश्चानियमस्ताने यत्र प्रजायते ।
स्थायी तानः स विज्ञेयो लक्ष्यलक्षणकोविदैः
संचारी तु स विज्ञेयः स्थाय्यारोहविमिश्रितः ॥
यत्र रागस्य विश्रांतिः समाप्तिद्योतको हि सः ॥

Every Raga had four parts, namely 'udgraha' 'sthayi' 'sanchari', and 'muktayi'. 'Udgraha' was the first part with which the raga 'alapa' was commenced. We shall now examine one or two raga definitions :—

शुद्धमेलोद्भवः पूर्णो धैवतादिकमूर्छनः ।
आरोहे गनिवर्ज्यः स्याद्रागःसैंधवनामकः ॥

Translation.—The raga "Saindhava" is produced from the shuddha thata. Its murchhana is Dhaivata and it drops the notes gandhara and nishada in the Aroha.

Observation.—What is the function of the Murchhana here, we ask? The answer will be found in the swara-karana given under the definition of the raga. It runs as follows :—

मपम गरिस निधधस । इत्युद्ग्राहः ।
धसरि इ० इ०

(*This is really the 'murchhana' of dhaivata*)

धसरिममगारिरिपप्पमगरिरिनीधपमगरिरिगरि
सनिध धस । इति स्थायी ।

Then comes the third portion of the 'alapa' called 'sanchari', and last comes the 'muktayi'. This shows that in singing a raga practically the murchhana was nothing more than the first member of the Raga alapa. We shall take another example.

आरोहे रिधहीना स्यात्पूर्णा शुद्धस्वरैर्युता ।
गांधारस्वरपूर्वा स्याद्धनाश्रीर्मध्यमान्तका ॥

Translation.—The Raga "Dhanasri" is produced from the shuddha swara thata. It drops 'ri' and 'dha' in the 'aroha' its murchhana is "gandharadika". The 'nyasa' or ending note is maddhyama.

Illustration ग म प नि स । रि स नि धं प म । ग म प म ग रि स । ग म प नि प नि स रि स नि ध प म । ग म प म प म ग म ग रि स । ग म ग म प नि प नि स ग स म ।

To sum up then, the Mela first laid down the right swaras with the right 'varjya-avarjya' rule for the raga intended to be sung. The

'Murchhana' added the necessary aroha and avaroha, and thus produced the actual raga. The 'alapa' invariably started with the 'murchhana' determining the name of the Raga

Later on it appears, the distinction between the mela and the Murchhana gradually disappeared and there was no restriction observed as to the 'udgraha' or the start Murchhana then merely meant perhaps the Aroha and Avaroha of the raga and it always started from the shadja In the Southern music system, even now, murchhana merely means the aroha and avaroha and nothing more Its starting point is always the same as that of the षड्ज Mela, which therefore coincides with it In the northern or Hindusthani system of the present day, the term murchhana has lost all its ancient significance The murchhana coinciding with the mela became indistinguishable from it . The mela directly produces the raga by the process of aroha and avaroha, strangely enough some of our modern Mahomedan professional artists are known to use the term in the sense of a kind of 'gamaka' too It will not be necessary to go into the raga-adhyaya of the Raga Tatva Vibodh, because there the author borrows the whole of his material from the Sangita Parijata It is noteworthy that in the time of all these three or four authors that we discussed all music was based on the well-known twelve notes only Sri Nivas emphatically disallows the use of the remaining ten srutis in the composition of the melas He says :—

श्रुतयो द्वादशैवात्र स्वरस्थानतयोदिता ।
तथोक्तवारिता. सर्वा अस्वरस्थानतयादिशन् ॥
न श्रुतिस्थस्वरोत्पन्नप्रस्तारग्राममेलजान् ।
युक्तोद्ग्राहप्रयुक्तो रागान्कल्पयतु मनस्विन· ॥

There were in his time it appears some Pandits, who talked of admitting twenty-four srutis into the scale, and with reference to them he says :—

चतुर्भिस्तौ सरौ प्रोक्तौ गनौ द्वाभ्यांव्यवस्थितौ ।
चतुर्भिः पमधा युक्ता एव श्रुतिविनिर्णयः ॥
अन्यांश्च विहृतान् कुर्यात् श्रुतिक्षेत्रविभागतः ।
प्रत्यक्षमानसिद्धार्थे शाब्दबोधपटुर्भवेत् ॥
एवं चोभयपक्षज्ञातमेलसमुद्भवाः ।
अनन्ता अपि रागाः स्युर्गमकोद्ग्राहभेदतः ॥

He has no quarrel with these theories, but in his own system he never allowed more than twelve srutis in the composition of his melas as Swaras He probably allowed the other srutis to come in occasionally as graces or ornamental Swaras in special cases.

SADRAGA — CHANDRODAYA

We shall now take up another group of Sanskrit treatises on Music. This group contains four works and the names of them are (1) Sadraga-Chandrodaya, (2) Raga Mala, (3) Raga Manjari and (4) Nartana-Nirnaya. We shall not discuss the last here, because the swara and raga chapters of that treatise, are the same as in the Raga Mala which we shall consider. The rest of the Nartana-Nirnaya deals with the art of dancing and falls beyond the scope of this paper. The author of the four treatises is Pundarika Vithala. He originally came from that part of India which is known as the Karnatik. It appears he came to the north and first settled in Khandesh. He describes his country and parentage in the concluding verse of the Sadraga Chandrodaya as follows:—

कर्णाटे शैवगंगाभिधनगनिकटे सातनूर्नाम्नियो यो ।
ग्रामस्तत्राग्रजन्यप्रवरसु निकरान्जामदग्न्योऽस्तिवंशः ॥
तत्र श्रीविठ्ठलार्योऽभवदमितयशास्तद्गुणाख्या तु तस्यै-
तत्सूनो रागचंद्रोदय इति च भजन् कैरवाणां मुदेऽस्तु ॥

When the Pandit actually wrote his Sadraga-Chandrodaya he was in the service of Faruqui rulers of Khandesh. This appears from the opening verses of the work.

वंशः फारुकिभूपतेः सुसरलो भूभारधारक्षमः ।
श्रीमत् सद्गुणिदानशूरविमलक्ष्मापालशाखानिधृत् ।
विख्यातो भुवि यत्र काव्यरसिकाः सत्कीर्तिवल्लीश्रिताः ।
चित्रं संचरतीति विश्वमखिलं के वर्णयन्तीतितत् ॥
तज्ज्ञः श्रीबुरहानखान चतुरः कामानुकारी वरः ।
संगीतादिकलाप्रपूर्णविमलः साहित्यतेजोमयः ।
दारिद्र्यांधतमश्च यश्च गुणिनां हंताप्युदारैः करैः ।
भूमौ फारुकिभूपतीश तिलकश्चंद्रश्चिरं राजते ॥
श्रीमद्दाक्षिणादिङ्मुखस्य तिलके श्रीखानदेशे शुभे ।
नित्यंभोगवतीव भोगिवसती रम्या सुपर्वादिभिः ।
अस्ति स्वस्तिकरी नरेंद्रनगरी त्वानंदवल्लीति या ।
तत्र श्रीबुरहाणखान नृपतिः संगीतमाकर्णयत् ॥

From these verses it appears that Pundarik Vithala was in the service of King Burhan Khan of Khandesh. Burhan Khan was the son of Taj Khan, the son of Muhammad Khan. Mr. Stanley Lane-Poole, in his work "The Muhammadan Dynasties" at pp. 315 says as follows:—

"Akbar took Burhanpur, the capital of Khandesh and received the homage of its king in 1562 A.D.; but Khandesh was not fully in-

corporated in the Moghul empire until 1599 A D when Ashirgarh fell in a six months' siege "

This enables us to fix the date of Pundarik Pundarika does not leave us in doubt as to his date at all In his Raga Manjari he says,

श्रीमत्कच्छपवंशदीपकमहाराजाधिराजेश्वरः ।
तेजःपुञ्जमहाप्रतापनिकरो भानुः क्षितौ राजते ॥
तस्यासीद्भगवन्तदासतनयो वीराधिवीरेश्वरः ।
क्षोणीमंडलमंडनो विजयते भूमंडलाखंडलः ॥
तस्य द्वौ तनयौ प्रभूतविनयौ शूरौ महाधार्मिकौ ।
जातौ पत्तिरथाश्वजीत्वकवारक्षोणीपतेः स्वौ भुजौ ॥
सिंहौ माधवमानपूर्वपदकौ संग्रामदक्षाग्रिमौ ।
तेजस्त्यागमहद्गहस्तकान्तिनौ श्रीमन्नृमीश्वरौ ॥
अकबरनृपधर्मौ शक्रतधातिमीमौ ।
धरणिगगनमध्ये जगमो मध्यमेकः ।
सकलनृपतितारावदमूरौ इमौ द्वौ ।
जगति जयनशीलौ माधवमानसिंहौ ॥

From this it appears that Pundarik was, when he wrote his Raga Manjari, in the service of the two brother princes Man Singh and Madhava Singh who were the feudatories of the Emperor Akbar Pundarik was the contemporary of Akbar (1556-1605) It is possible when Khandesh was annexed about the year 1599, Pundarik lost his appointment and took service at the capital of Madhava Singh

Here a question will arise Was Pundarik a southern or a northern musician? There is no doubt he came originally from a part of the country where the prevailing music system was the Karnatik system It is also true that in all the four books he wrote on Music, the shuddha scale on which he based his system was the Southern Mukhari or Kanakangi scale But a careful study of his books will show that the music which he actually wrote upon was undoubtedly the northern music. In the Sadraga Chandrodaya, we do find the author dealing with Ragas, common to both the systems, but in the Raga Mala and the Raga Manjari, he clearly expounds the music of Upper India We may safely, therefore, count Pundarika among our Northern authorities. His works are most clearly written. His poetry is charming The shuddha scale he adopts in his books may be written thus सा रि रे (called shudha ग) म प ध ध (called shudha नि) सां ।

This is the shuddha scale of the southern music even at the present day.

We shall now go into the subject matter of Pundarik Vithal's first book Sadraga Chandrodaya. The author begins by stating his srutis and swaras as follows:

द्वाविंशतिस्तीक्ष्णतराः क्रमेण ।
नादं तु तावच्छ्रुतितां नयंति ॥
कंठप्रदेशेऽप्यथ मूर्धदेशे ।
द्वाविंशतिः स्युः श्रुतयस्तथैव ॥
स्वराः श्रुतिभ्यः प्रभवंति ते तु ।
षड्जादयः सप्त यथाक्रमेण ॥
वेदाग्निपक्षाब्धिपयोधिवन्हि ।
पक्षांतिमश्र त्यधिसंश्रिताः स्युः ॥
षड्जाभिधानस्त्वृषभस्ततः स्यात् ।
गांधारको मध्यमपंचमौ च ॥
ततः परं धैवतको निषादः ।
इति स्वराः सप्त मता मुनींद्रैः ॥

The Pandit in these verses accepts the ancient view that there are twenty-two sounds, rising one above the other, available in music and known as srutis. Mandra maddhaya and tara are the three seats of sound. Each of these has twenty two srutis. The distribution of the twenty-two srutis among the seven swaras is the same as that in the case of the ancient writers. The names of the swaras are:

षड्ज, ऋषभ, गांधार, मध्यम, पंचम धैवत, निषाद

Their places among the srutis are not disputed because he accepts the usual rule that:—

चतुःश्चतुःश्चतुश्चैव षड्जमध्यमपंचमाः ।
द्वे द्वे निषादगांधारौ त्रिस्त्री ऋषभधैवतौ ॥

The shuddha swara stands as before on the last sruti. We know that all these facts were admitted by Lochana, Hrdaya, Ahobala, and Srinivasa too. But it must be remembered that the system adopted by Pundarik has never to be confounded with that of the other four Pandits. The shuddha scale of Pundarik being the Southern, his system will have to be studied independently. The swara names and some of the technical terms will differ from those of the northern system. Thus:

शुद्धाः स्वरा य तु भवंति सप्त ।
तज्ज्ञान् विकारान् प्रवदामि सप्त ॥

स्वोपान्तिकश्रु त्यविमश्रितः स्यात् ।
षड्जाभिधानो लघुषड्जनामा ॥
एवं मपौ स्तो लघुशब्दपूर्वौ ।
साधारणो गः प्रथमश्रुतिस्थः ॥
तस्य द्वितीयश्रुतिगोऽन्तरः स्यात् ।
षड्जाह्वयस्य प्रथमश्रुतिस्थः ॥
तथा द्वितीयश्रुतिवर्तमानो ।
निः कैशिकी काकलिनामधेयः ॥
स्वस्थानकस्थेषु च तेषु भेदाः ।
स्वरेषु भेदा विकृता मुनीन्द्रैः ॥

Translation—There are first of all the seven shudha swaras. I shall explain next the seven vikrita swaras. When shadja stands on its penultimate or the third sruti, it is called '*laghu-shadja*'. Similarly '*ma*' and '*pa*' standing on their penultimate srutis would be called '*laghu-ma*' and '*laghu-pa*'. When '*ga*' stands on the first sruti of '*ma*', it is called '*sadharana-ga*' and when it stands on the second sruti of '*ma*', it is called '*antar-ga*'; when nishada stands on the first sruti of '*sa*' it is "kaishiki-ni", and when it stands on the second sruti of '*sa*', it is called "kakali-ni". When the swaras stand on their proper places or srutis, they are supposed to be shuddha swaras only.

From these verses it will clearly appear that in the music system expounded in the Sadraga Chandrodaya, there will be seven shuddha swaras and seven vikrita swaras. The names of the seven vikrita swaras are as disclosed in the verses, are

(१) लघु षड्ज (२) लघु मध्यम (३) लघु पंचम (४) साधारण गांधार (५) अंतर गांधार (६) कैशिकनि (७) काकलीनि.

Their places among the srutis, will enable us to see that they will correspond with our present Hindusthani swaras bearing the following names —

तीव्रतम नि, तीव्रतम ग, तीव्रतम म, कोमल ग, तीव्र ग, कोमल नि, तीव्र नि.

Our modern komal '*ga*' and komal '*ni*', as we saw, were the shuddha '*ga*' and shuddha '*ni*' of Lochana, Hrdaya, Ahobala, and Srinivasa, and our shuddha '*ga*' and shuddha '*ni*', (which we call tivra '*ga*' and *tivra 'ni') were the tivratara 'ga' 'ni' of those writers*.

I have already said that the shuddha scale of the Sadraga Chandrodaya is the same as the shuddha scale of the southern system. We may conveniently compare it with our modern Hindustani shuddha scales and also with the shuddha scale of Lochana, and Ahobala as follows :—

SHUDDHA SWARAS

Pundarika	Hindustani	Lochana	European
(१) शुद्ध षड्ज	शुद्ध षड्ज	शुद्ध षड्ज	C
(२) शुद्ध ऋषभ	कोमल ऋषभ	कोमल ऋषभ	D^{6}
(३) शुद्ध गांधार	तीव्र ऋषभ	शुद्ध ऋषभ	D
(४) शुद्ध मध्यम	शुद्ध मध्यम	शुद्ध मध्यम	F
(५) शुद्ध पंचम	शुद्ध पंचम	शुद्ध पंचम	G
(६) शुद्ध धैवत	कोमल धैवत	कोमल धैवत	A^{6}
(७) शुद्ध निषाद	तीव्र धैवत	शुद्ध धैवत	A
VIKRITA SWARAS			
(१) लघु षड्ज	तीव्रतम निषाद	तीव्रतम निषाद	
(२) लघु मध्यम	तीव्रतम गांधार	तीव्रतम गांधार	
(३) लघु पंचम	तीव्रतम मध्यम	तीव्रतम मध्यम	F
(४) साधारण गांधार	कोमल गांधार	शुद्ध गांधार	E^{6}
(५) अंतर गांधार	तीव्र गांधार	तीव्रतर गांधार	E
(६) कैशिक निषाद	कोमल निषाद	शुद्ध निषाद	B^{6}
(७) काकली निषाद	तीव्र निषाद	तीव्रतर निषाद	B

N. B.—The positions of these swaras will explain themselves better when we examine their places on the vina frets.

The Vina of Pundarika was almost the same as our modern Vina, the wires and frets on both being placed and tuned alike. In the following verses, Pundarika describes the way he tuned the wires of his vina and placed his frets under them :—

लक्ष्यप्रवीणेन विनिर्मितायां ।
सुवीणिकायामुपरि प्रदेयाः ॥
तंत्र्यश्चतस्रोऽथ स एव पार्श्वे ।
ऽधो दक्षिणे तिस्र इमा निवेश्याः ॥
पुरोदितानामुपरिस्थितानां ।
वामप्रदेशाश्रितपूर्वतंत्र्याम् ॥
षड्ज विदध्यादणुमंद्रसंज्ञं ।
द्वितीयतंत्र्यामणुमंद्रपं च ॥
तृतीयतंत्र्यामपि मंद्रषड्जं ।
चतुर्थतंत्र्यामथ मंद्रमाख्यम् ॥
त्रितंत्रिकाणामधराश्रितानां ।

मापा तु मध्यस्थितषड्जकेन ॥
तंत्री समानश्च निरोपितव्या ।
द्वितीयिका मद्रपंचेन तद्वत् ॥
तार्तीयिका मद्रकषड्जकेन ।
तिस्रोऽग्रमूः स्युः श्रुतिनामधेयाः ॥

This is exactly how our modern musicians tune the wires of their vina Some of our players put anumandra 'ga' on the first wire in the place of the ancient anumandra 'sa' The three side wires were then called srutis We now call them "chikaris" Their tuning is immaterial for our purpose here

सारीनिवेशनम् । (The placing the frets)
आद्यानुमद्राख्यषड्जतन्त्र्या ।
शुद्धो यथा स्यादृषभस्तथाद्या ॥
सारी निवेशयेत तथा द्वितीया ।
तन्त्र्या तया शुद्धगसिद्धिहेतोः ॥
सारी तृतीयापि तथैव तंत्र्या ।
धार्येत साधारणगस्य सिध्यै ॥
सारी चतुर्थी लघुमध्यमस्य ।
सिध्यै तया तत्रिकया तथैव ॥
तन्त्र्या तयैव पंचमसारिका च ।
निधीयते शुद्धमपाधनाय ॥
सारी निवेश्या च तथैव षष्ठी ।
तन्त्र्या तथैव लघुपाञ्चमाय ॥

The purport of these verses can be best followed with the help of the following vina chart

	मद्रमतन्त्री चतुर्थी	मंद्र सा तन्त्री तृतीया	अनुमंद्र प तंत्री द्वितीया	अनुमन्द्र सा तन्त्री प्रथमा
	मद्र शुद्ध म	मंद्र शुद्ध सा	अनुमन्द्र प	अनुमद्र सा मेरु
(१)सारी	,, लघु प	,, शुद्ध ऋषभ	,, शुद्ध धैवत	,, मद्र शुद्ध ऋषभ
(२) ,,	,, शुद्ध प	,, शुद्ध गांधार	,, शुद्ध निषाद	,, शुद्ध गांधार
(३) ,,	,, शुद्ध ध	,, साधारण ग	,, कैशिकनि	,, साधारण गांधार
(४) ,,	,, शुद्ध नि	,, लघु म	,, लघु सा	,, लघु मध्यम
(५) ,,	,, कै० नि	,, शुद्ध म		,, शुद्ध मध्यम
(६) ,,	,, लघु सा			,, लघु पचम

Here a question will naturally be asked —Where are the frets for antara 'ga' and kakali 'ni' which two notes are also recognised by Pundarika among his vikritas? In fact without them, there would be only five vikritas and not seven The author anticipates the question and answers it thus —

SHUDDHA SWARAS

Pundarika	Hindustani	Lochana	European
(१) शुद्ध षड्ज	शुद्ध षड्ज	शुद्ध षड्ज	C
(२) शुद्ध ऋषभ	कोमल ऋषभ	कोमल ऋषभ	D^6
(३) शुद्ध गांधार	तीव्र ऋषभ	शुद्ध ऋषभ	D
(४) शुद्ध मध्यम	शुद्ध मध्यम	शुद्ध मध्यम	F
(५) शुद्ध पंचम	शुद्ध पंचम	शुद्ध पंचम	G
(६) शुद्ध धैवत	कोमल धैवत	कोमल धैवत	A^6
(७) शुद्ध निषाद	तीव्र धैवत	शुद्ध धैवत	A
	VIKRITA SWARAS		
(१) लघु षड्ज	तीव्रतम निषाद	तीव्रतम निषाद	
(२) लघु मध्यम	तीव्रतम गांधार	तीव्रतम गांधार	
(३) लघु पंचम	तीव्रतम मध्यम	तीव्रतम मध्यम	F
(४) साधारण गांधार	कोमल गांधार	शुद्ध गांधार	E^6
(५) अंतर गांधार	'तीव्र गांधार	तीव्रतर गांधार	E
(६) कैशिक निषाद	कोमल निषाद	शुद्ध निषाद	B^6
(७) काकली निषाद	तीव्र निषाद	तीव्रतर निषाद	B

N. B.—The positions of these swaras will explain themselves better when we examine their places on the vina frets.

The Vina of Pundarika was almost the same as our modern Vina, the wires and frets on both being placed and tuned alike. In the following verses, Pundarika describes the way he tuned the wires of his vina and placed his frets under them :—

लक्ष्यप्रवीणेन विनिर्मितायां ।
सुवीणिकायामुपरि प्रदेयाः ॥
तंत्र्यश्चतस्रोऽथ स एव पार्श्वे ।
ऽधो दक्षिणे तिस्र इमा निवेश्याः ॥
पुरोदितानामुपरिस्थितानां ।
वामप्रदेशाश्रितपूर्वतंत्र्याम् ॥
षड्ज विदध्यादणुमंद्रसंज्ञं ।
द्वितीयतंत्र्यामणुमंद्रपं च ॥
तृतीयतंत्र्यामपि मंद्रषड्जं ।
चतुर्थतंत्र्यामथ मंद्रमाख्यम् ॥
त्रितंत्रिकाणामधराश्रितानां ।

माया तु मध्यस्थितषड्जकेन ॥
तंत्री समानथु निरोपितव्या ।
द्वितीयिका मद्रकपेन तद्वत् ॥
तानीयिका मद्रकषड्जकेन ।
तिस्रोऽप्यमूः स्युः श्रुतिनामधेया· ॥

This is exactly how our modern musicians tune the wires of their vina Some of our players put anumandra 'ga' on the first wire in the place of the ancient anumandra 'sa' The three side wires were then called srutis We now call them "chikaris" Their tuning is immaterial for our purpose here

सारीनिवेशनम् । (The placing the frets)
आद्यानुमद्राह्वयषड्जतन्त्र्या ।
शुद्धो यथा स्यादृषभस्तथाद्या ॥
सारी निवेशयेत तथा द्वितीया ।
तन्त्र्या तया शुद्धगसिद्धिहेतोः ॥
सारी तृतीयापि तयैव तन्त्र्या ।
धीयेत साधारणगस्य सिध्यै ॥
सारी चतुर्थी लघुमध्यमस्य ।
सिध्यै तया तंत्रिकया तथैव ॥
तंन्त्र्या तयाँ पचमसारिका च ।
निधीयते शुद्धमसाधनाय ॥
सारी निवेश्या च तथैव षष्ठी ।
तंन्त्र्या तयैव लघुपाञ्चमाय ॥

The purport of these verses can be best followed with the help of the following vina chart

	मंद्रमतंत्री चतुर्थी	मद्र सा तंत्री तृतीया	अनुमंद्र प तंत्री द्वितीया	अनुमद्र सा तंत्री प्रथमा
(१)सारी	मद्र शुद्ध म	मंद्र शुद्ध सा	अनुमन्द्र प	अनुमद्र सा मेरु
(२) ,,	,, लघु प	,, शुद्ध ऋषभ	,, शुद्ध धैवत	,, मद्र शुद्ध ऋषभ
(३) ,,	,, शुद्ध प	,, शुद्ध गांधार	,, शुद्ध निषाद	,, शुद्ध गांधार
(४) ,,	,, शुद्ध ध	,, साधारण ग	,, कैशिकनि	,, साधारण गांधार
(५) ,,	,, शुद्ध नि	,, लघु म	,, लघु मा	,, लघु मध्यम
(६) ,,	,, कै० नि	,, शुद्ध म		,, शुद्ध मध्यम
	,, लघु सा			,, लघु पचम

Here a question will naturally be asked —Where are the frets for antara 'ga' and kakali 'ni' which two notes are also recognised by Pundarika among his vikritas? In fact without them, there would be only five vikritas and not seven The author anticipates the question and answers it thus —

चतुर्दशोक्ता नतु पूर्वमेते ।
स्वरास्ततो द्वादशसंख्यकानाम् ॥
सारीनिवेशः क्रियते भवद्भिः ।
कुतोऽन्तरे काकलिनि द्वयोर्न ॥
अत्रोच्यते काकलिनोऽतरस्यं ।
पंक्तौ प्रयुज्ये यदि सारि के द्वे ॥
संकीर्णभावान्न तदानुकूल्यं ।
स्याद्वादनेऽतो न कृते पृथग् द्वे ॥
तयोः समुत्पत्तिरुदीर्यते तु ।
चेत् प्रस्तुतस्तत्सहितोऽपि रागः ॥
लघ्वाख्ययोः षड्जमयोश्च सार्यौ ।
स्यातां यदैकैकश्रु तेर्विहीनौ ॥
तदाच काकल्यभिधांतरौ स्तः ।
किंत्वत्र सूक्ष्मध्वनिभेदविज्ञाः ॥
लघ्वादिकं सं लघुमध्यमं च ।
तत्प्रातिनिध्येन वदंति लक्ष्ये ॥

He says he deliberately omits these two frets because these frets coming too close to those of 'laghu-sa' and 'laghu-ma' would make play inconvenient. If, however, there are any ragas which require those two notes, those well versed in the shastra of music would allow these two notes to be represented by the higher notes laghu-sa and laghu-ma. The difference of one sruti will not make much of a difference in the general effect of the raga.

Observation.—This also shows that Pundarika was aware of the northern practice of expressing ragas in terms only of twelve notes.

We shall now proceed to the nineteen thatas under which Pundarika classifies his ragas.

तत्राद्यमेलस्तु मुखारिकायाः ।
ततो भवेन्मालवगौडमेलः ॥
श्रीरागमेलस्तदनंतरं स्यात् ।
स्याच्छुद्धनट्टाव्हयकस्य मेलः ॥
देशाक्षिकाया अपि मेलकः स्यात् ।
कर्णाटगौडस्य भवेत् सुमेलः ॥
केदारकाख्यस्य भवेत् सुमेलः ।
हिजेजमेलोऽपि हमीरमेलः ॥
कामोदरागाभिधस्य मेलः ।
ततः सुतोड्याव्हयकस्य मेलः ॥
आभीरिकायाः सुमतश्च मेलः ।
मेलो भवेत् शुद्धवराटिकायाः ॥
स्याच्छुद्ध रामक्रयभिधस्य मेलः ।
देवक्रियायाश्च भवेच्च मेलः ॥
सारंगमेलस्तदनंतरं स्यात् ।
कल्याणमेलस्तु ततः परं स्यात् ॥

हिंडोलरागस्य भवेत्तु मेलः ।
स्यान्नादरामक्रयभिधस्य मेलः ॥
इतीरितास्ते नवचंद्रमस्या ।
एव पारस्तात् कलयतु प्रज्ञाः ॥

These may be written with their respective swaras as follows :—

	थाट नाम	सा	री	ग	म	प	ध	नि	Hindustani Equivalents
१	मुखारी	सा	शुद्ध	शुद्ध	शुद्ध	शुद्ध	शुद्ध	शुद्ध	सा री री म प ध ध सां
२	मालव गौड	सा	,,	लघु म	,,	,,	,,	लघु सा	सा री ग म प ध नि सां
३	श्री	सा	चतुःश्रुति	साधारण	,,	,,	चतुःश्रुति	कैशिक	सा री ग म प ध नि सां
४	शुद्ध नाट	सा	त्रिश्रु. ग	लघु म	,,	,,	त्रिश्रु. नि	लघु मा	सा ग ग म प नि नि सां
५	देशाक्षी	सा	,,	,,	,,	,,	शुद्ध नि	,,	सा ग ग म प ध नि सां
६	कर्णाट गौड	सा	,,	,,	,,	,,	,,	त्रिश्रुति	सा ग ग म प ध नि सां
७	केदार	सा	शुद्ध ग	,,	,,	,,	शुद्धनि	लघु सा	सा री ग म प ध नि सां
८	हिजेज	सा	शुद्ध	,,	,,	,,	शुद्ध	कैशिक	सा री ग म प ध नि सां
९	हमीर	सा	शुद्ध ग	,,	,,	,,	शुद्ध	लघु मा	सा री ग म प ध नि सां
१०	धामोद	सा	शुद्ध	त्रिश्रुति	लघु प	,,	,,	त्रिश्रुति	मा री ग म प ध नि सां
११	तोडी	सा	,,	साधारण	शुद्ध	,,	,,	कैशिक	सा री ग म प ध नि सां
१२	आभीरी	सा	शुद्ध ग	,,	,,	,,	,,	लघु मा	मा री ग म प ध नि मा
१३	शुद्ध वराटी	सा	शुद्ध	शुद्ध	लघु प	,,	,,	लघु मा	सा री री मं प ध नि मा
१४	शुद्ध रामक्री	सा	,,	लघु म	लघु प	,,	,,	,,	मा री ग मं प ध नि गा
१५	देवक्री	सा			लघु प	,,	,,	शुद्ध	मा री ग मं प ध नि सां
१६	सारग	सा	शुद्ध ग		शुद्ध लघु प	,,	शुद्धनि	लघु मा	Doubtful.
१७	कल्याण	सा	,,	साधारण	शुद्ध लघु प	,,	,,	कैशिक लघु मा	सा री म मं प नि नि सां
१८	हिंदोल	सा	शुद्ध	त्रिश्रुति	लघु प	,,	शुद्ध	लघु सा	सा री ग मं प ध नि सां
१९	नाद रामक्री	सा	,,	साधारण	शुद्ध ,,	,, ,,	,,	निश्रुति नि लघु सा	सा री ग म प ध नि सां सा री ग म प ध नि सां

*शुद्धौ समौ शुद्धपनी तथैव लघ्वादिकौ षड्जकपंचमौ च ।
पंचश्रुतिर्मेश्च यदा भवेत्तु देवक्रियाया कथितः स मेलः ॥

Explanatory note

Pundarika's notes—Hindustani Notes   Hindustani Notation signs

शुद्ध रि, शुद्ध ध = कोमल रि, कोमल ध
चतुःश्रुति रि, चतुःश्रुतिध = तीव्र री, तीव्र ध
शुद्ध ग, शुद्ध नि = तीव्र री, तीव्र ध
साधारण ग = कोमल ग
कैशिक नि = कोमल नि
लघु सा, लघु म, लघु प = तीव्र नि, तीव्र ग, तीव्र म

री ग ध नि = कोमल रि, कोमल ग, ध, नि
मं - - - = तीव्र म
सां - - - = तार सा

जन्यजनक राग व्यवस्था—चंद्रोदये ।

मेल राग	जन्य रागाः
१ मुखारी	१ मुखारी
२ मालवगौड	१ मालव, २ गौडकृति, ३ गुर्जरी, ४ टक, ५ पाडी, ६ कुरंजी, ७ बहुली, ८ पूर्वी, ९ रामक्री, १० द्रविड गौड, ११ गौडी, १२ बंगाल, १३ आसावरी, १४ पंचम, १५ रेवगुप्ती, १६ प्रथम मंजरी, १७ कर्णाट बंगाल, १८ शुद्ध ललित, १९ शुद्ध गौड, २० देवगांधार, २१ मारवा ।
३ श्रीराग	१ श्रीराग, २ मालवश्री, ३ धनाश्री, ४ भैरवी, ५ सैंधवी ।
४ शुद्धनाट	१ शुद्धनाट ।
५ देशाक्षी	१ देशाक्षी ।
६ कर्णाट गौड	१ कर्णाट, २ तुरुष्कतोडी, ३ शुद्धबंगाल, ४ छायानट, ५ सामंत ।
७ केदार	१ केदार, २ नारायण गौड, ३ वेलावली, ४ शंकराभरण, ५ नटनारायण ६ मध्यमादि, ७ मल्लार, ८ गौड, ९ सारंगनाट, १० भूपाली, ११, सावेरी, १२ सौराष्ट्री, १३ कांभोजी ।
८ हिजेज	१ हिजेज ।
९ हमीरनाट	१ हमीरनाट ।
१० कामोद	१ कामोद ।
११ तोडी	१ तोडी ।
१२ आभीरी	१ आभीरी ।
१३ शुद्धवराटी	१ शुद्धवराटी, २ सामवराटी ।
१४ शुद्धरामक्री	१ शुद्धरामक्री, २ त्रावणी, ३ देशी, ४ ललित ।
१५ देवक्री	१ देवक्री ।
१६ सारंग	१ सारंग ।
१७ कल्याण	१ कल्याण ।
१८ हिंदोल	१ हिंदोल ।
१९ नादरामक्री	१ नादरामक्री ।

We shall not go into the definitions of these Janya Ragas here.

The Hindustani musician will find this classification very interesting. He will find many of his own ragas in the list. Some of these latter seem to have retained their original swaras to this day. The book therefore, is supposed to be of great historical importance.

This is another treatise by Pundarika Vithala It deals with the Northern system of Music proper Here too the author builds up his Raga system on the Southern Shuddha scale

सा रि् रि म प ध् ध सां.

We know that was also the shuddha scale of the Sadraga-Chandrodaya The names of the vikrita swaras here are not those of the Chandrodaya The ragas again are divided into three classes, namely 'purusha' ragas, 'stree' ragas, and 'putra ragas This is supposed to be the genuine northern style of Raga classification

After mentioning the three seats of sound 'mandra' madhya and 'tara', Pundarik says —

यंत्रेऽनुमद्रस्थान स्याद्रायके तदचयन ।
मद्रादित्रियं स्थान व्यवहारेऽभिधीयते ॥

The sruti is distinguished from the swara in the usual way

इतिः श्रुतिस्ततो लभजातोऽनुरणनध्वनिः ।
मात्रिदोषः श्रोतृचित्तं स्वतो रञ्जयति स्वर ॥

It is worth noting that in the time of Pundarika, as also in that of Hrdaya, Ahobala, and Srinivasa, there was only one 'grama in use and that was the shadja-grama All ancient writers were agreed that the shuddha scale commencing with shadja was the shadja-grama The shadja-grama of Lochana was our modern Kafi thata Pundarika s shadja-grama was the southern shuddha scale mentioned above The author accepts the old twenty-two srutis, and their distribution among the swaras.

द्वाविंशतिः श्रुतिस्थान सोपानाकारवत् क्रमात् ।
× × ×
प्रमवन्युच्चोच्चतराः श्रुतयः श्राव्यमानतः ॥
रागादिव्यवहाराय तासु सप्त स्वरा स्थिताः।
षड्जश्च ऋषभश्चैव गांधारो मध्यमस्तथा ॥
पचमो धैवतश्चाथ निषादश्चेत्यनुक्रमात् ।
तेषां संज्ञाः सरिगमपधनीत्यपरा मताः ॥
वेदाचलांकश्रुतिषु त्रयोदश्यां श्रुतौ तथा ।
सप्तदश्यां च विंश्यां च द्वाविंश्यां च श्रुतौ क्रमात् ॥
षड्जादीनां स्थितिः प्रोक्ता प्रथमा भरतादिभिः ॥

The word "sthiti" in the last line has to be carefully noted Pundarika means by it the original or shuddha place of the swara He uses the word in contradistinction to the word "gati', by which he means the vikriti of the note When a swara becomes vikrita, it leaves its original place or 'sthiti" and moves Thus the word "gati' happily represents the idea of change The shuddha scale being southern, the vikritis of the swaras will necessarily be the higher "gati" of the

shuddha swara. Each "gati", will be measured by a sruti. For instance, gandhara rising one sruti will be called "trigatika", when it rises two srutis, it will be supposed to have gone up two "gatis" and so forth. The shuddha place of the gandhara, is as we know, two srutis *above the* shuddha rishabha.

असपाः पूर्वपूर्वास्ते संचरंत्युत्तरोत्तरम् ।
त्रिस्त्रिर्गतीस्ते प्रत्येकं याति गश्च चतुर्गतीः ॥

Translation.—All swaras with the exception of sa and pa, will be allowed to rise up to *three* "gatis" or srutis. The gandhara alone will be permitted to go up to the fourth sruti *of the next note* maddyama.

यद्यद्रागोपयोगः स्यात्तत्तदिच्छागतिर्भवेत् ।
गन्योर्गती द्वितीये चांतरकाकलिनौ स्मृतौ ॥
पंचम्यष्टादशी षष्ठी तथा चैकोनविंशतिः ।
चतस्रः श्रुतयश्चैता रागाधैरप्रयोजकाः ॥
शेषा अष्टादशैव स्युः श्रुतयः स्वरबोधकाः ।
न्यूनाधिकैकगातिका मंद्रतारस्वरा यदि ।
न रागहानिकाः सर्वे स्पष्टता मध्यसप्तके ॥

Translation.—The use of the "gatis" will naturally depend upon the nature of the raga proposed to be sung or played. The second "gatis" of gandhara and nishada have special names, namely "antar-gandhara" and "kakali-nishada". These names will be used whenever the ga and ni rise two srutis. The srutis fifth, sixth, eighteenth and nineteenth will never be used in any raga at all. Barring these four, the remaining eighteen will be allowed to be so used. The rise or fall by one sruti only in the mandra and tara octaves, could safely be neglected. It will not destroy the general effect of a raga. In the maddhya octave, however, it will be proper to use the prescribed *sruti-swara.*

Observation.—The srutis five, six, eighteen, and nineteen are barred because in the southern scale, the shuddha ri and shuddha dha are supposed to be the lowest sounds of those notes. Ri and dha when shuddha, are always three sruti notes. No swaras therefore, are allowed between sa and shuddha ri and pa and shuddha dha. The provision in the last verse is intended to avoid the difficulty of having a four sruti note and a three sruti note standing on the same fret of the vina in samvadi relationship. We find a similar provision in the Raga Vibodha of Somnath.

Pundarika being a southern Pandit may have read the Swara Mala Kalanidhi of Ramamatya and the Raga Vibodha of Somnath.

The following chart will show at a glance the places and the names of the shuddha vikrita swaras of the Raga Mala.

	श्रुति नाम	शुद्ध स्वर स्थिति	विकृत स्वर गति	प्रस्तुत हिन्दुस्थानी स्वर नाम
१	तीव्रा	...	एकगतिक नि	कोमल निषाद (Southern कैशिक नि)
२	कुमुद्वती	...	द्विगतिक नि	तीव्र निषाद (Southern काकली नि)
३	मंदा	...	त्रिगतिक नि	(तीव्रतम नि)
४	छंदोवती	शुद्ध षड्ज	...	शुद्ध षड्ज
५	दयावती	...	...	Not to be used } According to Pundarika अप्रयोजक:
६	रजनी	...	...	Not to be used
७	रतिका	शुद्ध ऋषभ	...	कोमल ऋषभ
८	रौद्री	...	प्रथम एक गतिक रि	
९	क्रोधी	शुद्ध गांधार	द्विगतिक रि	तीव्र ऋषभ (Southern चतु श्रुतिक रि= पंचश्रुतिरि)
१०	वज्रिका	...	एकगतिक गांधार	कोमल गांधार ,, साधारण गांधार)
११	प्रसारिणी	...	द्विगतिक ,,	तीव्र गांधार ,, अंतर गांधार)
१२	प्रीति	...	त्रिगतिक ,,	(तीव्रतम ग)
१३	मार्जनी	शुद्ध मध्यम	चतुर्गतिक ,,	शुद्ध मध्यम
१४	क्षिति	...	एकगतिक मध्यम	
१५	रक्ता	...	द्विगतिक ,,	तीव्र म
१६	संदीपिनी	...	त्रिगतिक ,,	(तीव्रतम म)
१७	आलापिनी	शुद्ध पंचम	...	शुद्ध पंचम
१८	मदंती	Never	used	
१९	रोहिणी	Never	used	
२०	रम्या	शुद्ध धैवत	...	कोमल धैवत
२१	उग्रा	...	एकगतिक ध	
२२	क्षोभिणी	शुद्ध निषाद	द्विगतिक ध	तीव्र ध (Southern चतुःश्रु०=पंचश्रु०ध
१	तीव्रा	...	एकगतिक नि	कोमल नि ,, कैशिक नि)
२	कुमुद्वती	...	द्विगतिक नि	तीव्र नि ,, काकली नि)
३	मंदा	...	त्रिगतिक नि	(तीव्रतम नि)
४	छंदोवती	शुद्ध षड्ज	...	

N. B.—The notes underlined are the notes of the present Hindustani Music system.

After explaining the shuddha and vikrita swaras, the author defines the following technical terms, वादी, संवादी, अनुवादी, विवादी, ग्रह, अंश and न्यास as follows:—

चतुर्विधाः स्वरा वादी संवादी च विवाद्यपि ।
अनुवादीति वादी तु प्रयोगे बहुलः स्वरः ।
अंशः स्थायीति पर्यायः रागोत्पादनहेतुकः ।
श्रुतयो द्वादशाष्टौवा ययोरंतरगोचराः ॥
मिथः संवादिनौ तौ स्तो गत्यादेश्चविभागतः ।
शेषाणामनुवादित्वं ज्ञेयमन्वर्थतः क्रमात् ॥

We have already discussed these terms and need say nothing further about them.

गीतादिनियतमात्रः स्वरो ग्रह इतीरितः ।
प्रयोगे बहुलोऽशः स्यान्यासो गीतिसमाप्तिकृत् ॥

Translation.—The note which begins a song is called "graha"; the one that ends it is called "nyasa", and the note which is most frequently used in the gita is called "ansha", which is synonimous with the 'vadi' or 'sthayi'. षड्जः सर्वत्ररागे च ग्रहः। Sa is the 'graha' of every raga. The terms 'graha', ansha, and 'nyasa' had apparently lost their ancient significance in the modern "deshi" sangeeta. Pundarika says in the Chandrodaya:—

न्यासग्रहांशेषु च पूर्णतायां ।
श्रुतौ तथा षाडव औडुवेऽपि ॥
सर्वत्र देशीगतरागवृन्दे ।
श्रीमद्धनूमान् नियमं न वव्रे ॥

RAGA-ADHYAYA

In the Raga-adhyaya of the Raga Mala, Pundarika, first lays down his six 'purusha' ragas, and then gives each of them five 'bharyas', and five 'putras'.

राग नाम	रागभार्याः	पुत्राः
१ शुद्धभैरव	१ धन्नासी, २ भैरवी, ३ सैंधवी, ४ मारवी, ५ आसावरी	१ भैरवी, २ शुद्धलितः, ३ पंचम, ४ परज, ५ बंगाल
२ हिंडोल	१ भूपाली, २ वसंती, ३ तोडी, ४ प्रथममंजरी, ५ तुरुष्कतोडी	१ बसंत, २ शुद्ध बंगाल, ३ श्याम, ४ सामंत, ५ कामोद
३ देशकार	१ रामक्री, २ बहुली, ३ देशी, ४ जेतश्री, ५ गुर्जरी	१ ललित, २ विभास, ३ सारंग, ४ त्रिवण, ५ कल्याण
४ श्रीराग	१ गौंडी, २ पाडी, ३ गुणकरी, ४ शुद्धरामक्री, ५ गुंडक्री	१ टक, २ देव गांधार, ३ मालव, ४ शुद्ध गौड, ५ कर्णाटबंगाल
५ शुद्धनाट	१ मालवश्री, २ देशाक्षी, ३ देवक्री, ४ मधुमाधवी, ५ अहीरी	१ जिजावंती, २ सालंगनाट, ३ कर्नाट, ४ छायानट, ५ हमीरनाट
६ नटनारायण	१ वेलावली, २ कांबोजी, ३ सावेरी, ४ सुहवी, ५ सौराष्टी	१ मल्हार, २ गौंड, ३ केदार, ४ शंकराभरण ५ बिहागडा

It will be seen that all these raga names are to be found in the modern Hindustani system. Nay, many of the ragas, will be found to have preserved as nearly as possible their old forms. The new time theory of the Hindustani musicians naturally brought in some characteristic changes and made the arrangement of the ragas still more attractive. In describing the thata of each raga in the Raga Mala Pundarika accomplishes two wonderful things. He first gives the swaras of the ragas and then gives the 'devatatmaka' appearance or picture of the raga as also the time for its singing. For instance,

सपोजातोद्भवोऽयं प्रथमगतिगनिः सविवंरिः कपर्दी ।
रक्तःश्यामश्रिशूली सितवसनो भस्मदिग्धितेत्र. ॥
कंठे शृंगि दधानः श्रवणयुगलतो मुद्रिके चन्द्रचूडो ।
हेमंतेऽपि प्रभाते विलसति वृषभे भैरवः शुद्धपूर्वः ॥

Explanation.—Here the first line tells us that shuddha-Bhairava drops pa and ri and is प्रथम गतिगनि that is it takes the komal ga and komal ni. The rest of the sloka describes the Madadeva who is the presiding deity of the raga.

I shall not go into all the slokas describing all the ragas here but shall write down the first raga Shuddha-Bhairava with its swaras as given in the book. The Raga Mala is a printed book now which can be had for a few annas.

शुद्ध भैरव	स, शुद्ध रि, एकश्रुति ग, शुद्ध म, शुद्ध प, शुद्ध ध एकश्रुति नि	Explanatory Note
१ धनाश्री	स, एकश्रुति रि, एकश्रुति ग, ,, ,, एकश्रुति ध एकश्रुति नि	त्रिश्रुति = [illegible]
२ भैरवी	स, ,, ,, ,, ,, ,, ,,	[illegible] = [illegible]
३ [illegible]	स, ,, ,, ,, ,, ,, ,,	[illegible] = १ [illegible] = १
४ [illegible]	स, शुद्ध रि, त्रिश्रुति ग, ,, ,, शुद्ध ध त्रिश्रुति नि	[illegible] = [illegible]
५ [illegible]	स ,, ,, [illegible] ,, ,, एकश्रुति नि	
[illegible]		
१ [illegible]	स, शु. रि, त्रिश्रुति ग, शु. म, शु. प, शु. ध, एकश्रुति नि	
२ [illegible]	स, ,, [illegible] takes all notes of the [illegible]	
३ [illegible]	स, ,, ,,	
४ [illegible]	स, शु. रि, त्रिश्रुति ग, शु. म, शु. प, शु. ध, त्रिश्रुति नि	[illegible]
५ [illegible]	स, ,, ,, त्रिश्रुति ग, ,, ,, ,, त्रिश्रुति नि	

RAGA MANJARI

The third treatise of Pundarika which we consider is the Raga Manjari. In this treatise also the writer sticks to his shuddha scale. The names of shuddha and vikrita swaras, and the method of describing these are the same as those of the Raga Mala. We thus find in the treatise the following verses of the Raga Mala repeated :

वेदाचलांकश्रुतिपुत्रयोदश्यां श्रुतौ ततः ।
सप्तदश्यां च विंश्यां च द्वाविंश्यां च श्रुतौ क्रमात् ॥
षड्जादीनां स्थितिः प्रोक्ता प्रथमा भरतादिभिः ।
असपाः पूर्वपूर्वस्मात् संचरंत्युत्तरोत्तरमः ॥
त्रिस्त्रिर्गतीस्ते प्रत्येकं याति गश्च चतुर्गतिः ।
यद्यद्रागोपयोगः स्यात्तत्तदिच्छागतिर्भवेत् ॥

These verses have already been discussed, and we shall not repeat the discussion here. Pundarika adds an explanation in which he compares some of his vikrit swaras with those of the southern system. He says :—

साधारणः कैशिकी चांतरकाकलिनौ यथा ।
साधारणः कैशिकी द्वौ क्रमाद्गतिगनिक्रमः ॥

Translation.—The notes 'sadharana', 'kaishika', 'antara' and 'kakali', are only the first and the second gatis of gandhar and nishada. What he means is that sadharana and kaishika are the prathama gatis of gandhar and nishad respectively, and the antara and kakali are the second gatis of the same two notes, Sadharana ga corresponding with the prathama gati of ga and kaishika ni being the prathama gati of ni. Antar ga and kakali ni are the second gatis of ga and ni respectively.

ऊर्ध्वखलस्तु गांधारो मध्यमोपरिसंस्थितः ।
मस्य त्रिगतिभेदाश्च मनुः पक्षांतिको नृपः ॥

Translation.—When the note gandhar rises to its last gati it coincides with the shuddha maddyama. The shuddha maddyama rises through three gatis or shrutis and bears the three names मनु मध्यम, पक्षांतिक मध्यम, and नृप मध्यम, respectively.

These gatis would practically be the sounds of the fourteenth fifteenth and sixteenth srutis.

अथ कैशिकिनौ आद्यौ ऊर्ध्वखलौ द्वितीयकौ ।
अत्युच्छ्रं खलनामानौ तृतीयगतिकौ रिधौ ॥

Translation.—When ri and dha rise only one sruti each, they become 'kaishika' ri and 'kaishika dha' respectively. When they rise

two srutis, they become ऊर्ध्वसल रि, ऊर्ध्वसल ध. when they rise three srutis, they will be called अनुचर्ह्मल रि ध respectively

A glance at the Sruti Swara chart of the Raga Mala will show clearly the positions of the swaras of the Raga Manjari also The definitions of the terms वादी, सवादी, etc, are in no way different to those given in the Raga Mala All ragas are founded on the shadja-grama alone

षड्जग्रामाश्रितान् रागान् सर्वे गायन्ति गायकाः ।
तस्मान्मुख्यतमः षड्जग्राम एव न चापरो ॥

On the question of the murchhanas, नष्टोद्दिष्ट and वर्ण Pundarika simply quotes the verses of Sharangdeva Pandit the author of the Sangeeta Ratnakara It is to be remarked that none of the writers of the last three or four centuries, say anything useful about the jatis of Sharangdeva and Bharata, which evidently had gone out of use in their time All music was confined to one grama, namely the shadja-grama, with its' own shuddha and vikrita swaras all complete Thatas were constructed out of these swaras, and these thatas produced their own "janyaragas" All ragas were based on a system of twelve shuddha and vikrita swaras as a general rule There were two leading shuddha scales in the country The northern scale corresponded with our modern kafi scale, and the southern shuddha scale was the modern Kanakangi of the Karnatik system

Querry —When did the Bilawal scale come to be adopted as the shuddha scale of the Hindusthani music system? To this question there is no answer in any of the old Sanskrit treatises

In the Raga-adhyaya Pundarika begins by laying down twenty thatas for the classification of his Janya-ragas These thatas are .

पूर्वाटी सोमरागश्च टोडी गौडी वराटिका ।
केदारः शुद्धनाटश्च देशाक्षी देशिकारकः ॥
सारंगाहेरिकल्याणकामोदाश्च द्विजेजिकः ।
नादरामक्रियहिंदोलौ कर्णाटश्च हमीरकः ॥
मालवश्रीशिरोऽथ श्रीरागश्चेत्यनुक्रमात् ॥

The following chart will give the twenty thatas with their shuddha and vikrita notes The Hindustani equivalents will make the positions of the notes clear to the modern students.

राग नाम	सा	री	ग	म	प	ध	नि	हिंदुस्थानी स्वर नाम
१–मुखारी	शुद्ध	शुद्ध	शुद्ध	शुद्ध	शुद्ध	शुद्ध	शुद्ध	सा री री म प ध ध सां
२–सामराग	,,	,,	,,	,,	,,	,,	एकगति	सा री री म प ध नि सां
३–तोडी	,,	,,	एकगति	,,	,,	,,	,,	सा री ग म प ध नि सां
४–गौडी	,,	,,	तृतीय गति	,,	,,	,,	तृतीय गति	सा री ग म प ध नि सां
५–वराटी	,,	,,	शुद्ध	तृतीय गति	,,	,,	,,	सा री री मं प ध नि सां
६–केदार	,,	द्वितीय गति	तृतीय गति	शुद्ध	,,	द्वितीय गति	,,	सा री ग म प ध नि सां
७–शुद्धनाट	,,	तृतीय गति	,,	,,	,,	तृतीय गति	,,	सा ग ग म प नि नि सां
८–देशाक्षी	,,	,,	,,	,,	,,	शुद्ध	,,	सा ग ग म प ध नि सां
९–देशिकार	,,	शुद्ध	,,	तृतीय गति	,,	,,	,,	सा री ग म प ध नि सां
१०–सारंग	,,	द्वितीय गति	तृतीय गति	,,	,,	तृतीय गति	,,	सा री म मं प नि नि सां
११–आहेरी	,,	,,	एकगति	शुद्ध	,,	शुद्ध	,,	सा री ग म प ध नि सां
१२–कल्याण	,,	,,	तृतीय गति	तृतीय गति	,,	,,	,,	सा री ग मं प ध नि सां
१३–कामोद	,,	शुद्ध	एकगति	,,	,,	,,	एकगति	सा री ग म प ध नि सां
१४–हिजेज	,,	,,	,,	शुद्ध	,,	,,	,,	सा री ग म प ध नि सां
१५–नादरामक्री	,,	,,	,,	,,	,,	,,	,,	Do. (In the Raga mala गुणविधुगति नि
१६–हिंदोल	,,	द्वितीय गति	,,	,,	,,	,,	,,	सा री ग म प ध नि सां
१७–कर्णाट	,,	,,	तृतीय गति	,,	,,	तृतीय गति	तृतीय गति	सा री ग म प नि नि सां
१८–हंमीर	,,	,,	,,	,,	,,	शुद्ध	,,	सा री ग म प ध नि सां
१९–मालव कैं०	,,	एकगति	एकगति	,,	,,	एकगति	एकगति	सा री ग म प ध नि सा
२०–श्रीराग	,,	,,	तृतीय गति	,,	,,	,,	,,	सा री ग म प ध नि सां

मेल नाम	जन्य रागाः
१ मुखारी	१ मुखारी
२ सोमराग	१ सोमराग
३ गौंडी	१ गौडी २ कर्णाटबगाल ३ गुर्जरी ४ बहुली ५ आमावरी ६ रामक्री, ७ मारू, ८ टक्क ९ गुणकरी १० शुद्धललित ११ पंचम १२ पटमंजरी १३ मालवगौड १४ पूर्वी १५ पाडी १६ भैरवी।
४ टोडी	१ टोडी २ शुद्धभैरव
५ वराटी	१ श्यामवराटी २ शुद्धवराटी
६ केदार	१ केदार २ गौड ३ मल्हार ४ नट नारायण ५ बेलावली ६ भूपाली ७ कांबोजी ८ मधुमाधवी ९ शंकराभरण १० सावेरी ११ सहवी १२ नारायणी १३ केदारनाट
७ शुद्धनाट	१ शुद्धनाट
८ देशाक्षी	१ देशाक्षी
९ देशकार	१ देशकार २ भावणी ३ देशी ४ ललित ५ दीपक ६ विभास
१० सारंग	१ सारंग
११ आहेरी	१ आहेरी
१२ कल्याण	१ कल्याण
१३ कामोद	१ कामोद
१४ हिजेज	१ हिजेज २ अपरभैरव
१५नादरामक्री	१ नादरामक्री
१६ हिंदोल	१ हिंदोल २ वसंत
१७ कर्नाट	१ कर्णाट २ सामंत ३ सौराष्ट्री ४ छायानट ५ शुद्धबंगाल ६ तुरुष्कतोडी
१८ हमीर	१ हमीर
१९ मालव कै.	१ मालवकैशिक २ मालवश्री ३ धन्यासी ४ सैंधवी ५ देवगांधार
२० श्री	१ श्रीराग

This list will no doubt be of great interest to the student of the Hindustani system of music

Towards the end of the book, Pundarika takes note of a few Persian ragas which he perhaps found introduced into the Hindustani system by the Mohamedan musicians.

अन्येऽपि पारसिकिया रागाः परदनामकाः ।
संपूर्णाः सर्वगमकाः काफल्पंतरिता सदाः ॥
रहावी देवगांधारे कानरेच निशावरः ।
सारंगे माहुरो नाम जंगूलोऽथ वंगालके ॥
देश्यामाहुंगको नाम वारा मल्हाररागके ।
केदारेऽपि च गूल्हाथ धनाल्यां च इराकिका ॥
जिजावत्यां च हुसेनी मालवे मुसलीककः
कल्याणे यमनं गायेत् सर्पर्दोऽयं विलावले ॥
देशिकारे बाखरेजः आसावर्यां हिजेजकः ।
देवगिर्यां मुशकाल्य एवमन्येऽपि योजयेत् ॥

Pundarika has no doubt done a great service to the music scholar by giving these Persian melodies with their Indian equivalents. Possibly, the locative case termination of the Indian rāga name is intended to show that the Persian melody is not exactly the same as the Indian but that the two are founded on the same scale.

RASA-KAUMUDI

The author describes his place of residence and patron as follows:

ख्यातो दिव्यकुलेऽभवद्गुणनिधिर्विप्रोत्तमो मंगलः ।
श्रीमद्विष्णुपदारविंदयुगले भक्तस्तदीयात्मजः ॥
काव्यं काव्यकलाकलापकुशलः श्रीकण्ठनामा कविः ।
कुर्वेऽहं रसकौमुदीति निपुण. संगीतसाहित्ययोः ॥
द्वारावत्याः समीपे नवनगरपुरे क्ष्मापतिः पूर्वभागे ।
जाम श्रीःशत्रुशल्यः सकलजनमनोरञ्जकः पुण्यराशि. ॥
श्रीकंठस्तत्सभायां कविरमलमतिर्विपते विप्रवर्यः ।
तेन प्रौढप्रमेयश्रुतिकरसुभगं रच्यते काव्यमेतत् ॥

from this it would appear that the author's name was Sri Kantha, and the book was written while he was in the service of the Jam Saheb of Nawa Nagar, a town near the well-known sacred city of Dwara

The General Arrangement of the Work.

The book is first divided into two khandas or parts Each of these again contains five adhyayas or chapters The first khanda with which we are concerned is called the Sangeet khanda, and the second deals with Sahitya or rhetoric The contents of the first chapter of the first khanda are described in the following slokas

संगीतं प्रथमं तस्मात् पूर्वखंडे निगद्यते ।
साहित्यमुत्तरे खंडे ग्रन्थस्यास्य क्रमो भवेत् ॥

अध्यायैर्दशभिर्विभूषिततनुः खंडद्वयेनोज्ज्वला ।
स्वच्छंद रसकौमुदी विजयते विद्वन्मनोरंजिनी ॥

अध्यायैः किल पंचभिर्विरचितं तत्राद्यखंडं परम् ।
खंड पंचभिरेव नव्यरचना साहित्यसंदीपकम् ॥

अध्याये प्रथमे तत्र चक्राणि नादसंभवः ।
स्थानानि श्रुतयः शुद्धाः स्वरा. सप्त विकारजाः ॥

ग्रामादिभेदाश्चत्वारो ग्रामौ तद्गतमूर्छनाः ।
शुद्धकूटाभिधास्तानाः प्रस्तारस्तद्गसंख्यया ॥
नष्टोद्दिष्टं महायाश्च वर्णाऽलंकार संग्रहः ।
वर्ण्यंते क्रमशश्चैते गीतशास्त्रप्रमाणतः ॥

This is the usual पदार्थसंग्रह of the Swaradhyaya of all ancient Samskrit writers.

The author then deals with the different subjects mentioned in the last slokas in their order. We need not go into these details because there he borrows everything from older authors but puts the thing in his own way. The description of the sruti for instance is nothing more than a paraphrase of the Naradi Shiksha definition. The placing of the swaras again on the srutis is the same as that of the ancient writers. Thus:

स्वोपांत्यश्रुतिसंस्थास्ते षड्जमध्यमपंचमाः ।
भरतादिभिराचार्यैश्च्युतपूर्वाभिधा मताः ॥
साधारणाभिधो गान्धारो मध्यश्रुतिगो यदि ।
अंतराख्यो ततो याति द्वितीयश्रुतिसंस्थितः ॥
षड्जस्याद्य श्रुतिगतो निषादः कैशिकी मतः ।
वर्तमानो द्वितीयायां काकली स निगद्यते ॥
स्वरास्ते मिलिताः सर्वे चतुर्दश भवंति ते ॥
नो दृश्यते यथा मार्गो मीनानां जलचारिणां ।
यथा व्योम्नि विहंगानां तथा स्वरगता श्रुतिः ॥

The only wonder is that the author does not find any difficulty in reconciling the definition of the sruti with the description of the swaras. Sri Kantha evidently recognises seven shuddha and seven vikrita swaras which he describes in the above slokas. His swaras may be compared with the modern Hindusthani swaras as follows:

Shri Kantha's swaras			Hindusthani swaras
१ शुद्ध सा	...	...	... १ शुद्ध सा.
२ शुद्ध री	...	...	... २ कोमल री.
३ शुद्ध ग	...	...	... ३ तीव्र री.
४ साधारण ग	...	...	... ४ कोमल ग.
५ अंतर ग	...	...	... ५ तीव्र ग.
६ उपांत्य or पतम		...	... ६ तीव्रतम ग.
७ शुद्ध म	...	...	... ७ शुद्ध म.

८ उच्चांत्यप or षतप	...	... ८ तीव्र म.
९ शुद्ध प ...	...	... ९ शुद्ध प.
१० शुद्ध ध ...	...	... १० कोमल ध.
११ शुद्ध नि ...	...	... ११ तीव्र ध.
१२ कैशिक नि ...	...	... १२ कोमल नि.
१३ काकली नि ...	...	... १३ तीव्र नि.
१४ उपांत्य सा-षतमा	...	... १४ तीव्रतम नि.

The ancient gramas are disposed off thus

षड्जमध्यमयोर्मध्ये षड्जस्य मुख्यता भवेत् ।
आपत्वादविलोपित्वाद्यथार्थवचनान्मुनेः ॥

षड्जमध्यमजातानां मूर्छनानां परस्परम् ।
किंचिद्विशेषत्वादेकत्वमुक्तवान् दत्तिलः स्फुटम् ॥

तस्माच मेनिरे ग्रामं मध्यम गुरवो मम ॥

Whatever his reason we see that he recognises only one grama namely the shadja grama On the subject of murchhana, tana, alankara and prastara, he has hardly anything new to tell us There is no evidence to show that he understood clearly the functions of the ancient gramas and murchhanas. Then comes the Raga Adhyaya All music was based on twelve notes, as in the case of the other writers

अथ रागविवेकाख्ये द्वितीये वर्ण्यते क्रमात् ।
रागस्तुतिस्तु वीणायाः प्रशंसा तदनन्तरम् ॥
स्वराणां स्थापनं चैव भेदो वादनसंभवः ।
विवेकश्चैव रागाणां ध्यानानि गमकादयः ॥

In the Raga Adhyaya, he describes the Vina in full detail The wires were tuned as follows:

ऊर्ध्वतंत्रीषु या वामे तस्यां सामनुमद्रकम् ।
पचमंचानुमंद्राख्य द्वितीयायां निवेशयेत् ।
मद्रषड्जं तृतीयायां चतुर्थ्यां मंद्रमध्यमम् ॥

This arrangement exactly tallies with that of Rama-Amatya and Somnath as will be seen later on But Pundarika, tuned his wires in the same way The placing of the frets is described in the following verses (Vide Pundarika's Vina Chart).

सारीनिवेशनं युक्त्या क्रमतः प्रतिपद्यते ।
अनुमंद्रगतंत्र्याद्यो शुद्धो रिःस्यात्पथा तथा ॥

निवेश्या प्रथमा सारी, तथा तन्त्र्यां द्वितीयिका ।
शुद्धगांधारसिध्यर्थं, तथा तंत्र्यां तृतीयिका ॥

साधारणाख्यगांधारसिद्ध्यै क्रमशस्ततः ।
स्यादन्यैव तुर्यापि च्युतमध्यमहेतवे ॥

शुद्धमध्यमसिध्यर्थं सारिका पंचमी तथा ।
तंत्र्यां तथा पुनः षष्ठी पतपंचमसिधये ॥

शेषास्विह त्रितन्त्रीभिर्युक्तसारीषु ये स्वराः ।
वर्ण्यंते ते क्रमेणैव गुरुणा मे यथोदिताः ॥

पंचमेनानुमंद्रेण या तन्त्री समुपाश्रिता ।
तया द्वितीयया तन्त्र्या जायते शुद्धधैवतः ॥

ततः शुद्धनिषादाख्यो निषादः कैशिकी पुनः ।
तत्पुरस्तात् पतः षड्जः शुद्धषड्जस्ततः परम् ॥

तत्पश्चादृषभः शुद्धः षडेते गदिताः स्वराः ।
जातौ द्वितीयया तन्त्र्या विशुद्धौ यौ सगौ स्वरौ ॥

स्थाप्यौ नैव प्रयोगे तौ यतस्तंत्र्या तृतीयया ।
जायेते तौ पुनर्मंद्रौ शुद्धौ वीणाविदोदितौ ॥

एतेऽनुमंद्रजाः प्रोक्ताः कथ्यंते मंद्रजाः क्रमात् ।
तंत्र्या तृतीयया मंद्रस्तस्य सारीषु तास्वपि ॥

तथैव स्युः क्रमादेते स्वरा जनमनोहराः ।
तत्र तावतया तन्त्र्या विशुद्धमध्यमो भवेत् ॥

पतपंचमकः पश्चादप्रयोगौ पुनः स्वरौ ।
संजायेते यतस्तंत्र्या चतुर्थ्यामिति निर्णयः ॥

चतुर्थ्यापि पुनस्तन्त्र्या मंद्रमध्यमयुक्तया ।
षट्सु तास्वपि सारीषु भवेयुः क्रमशः स्वराः ॥

पतपः प्रथमः शुद्धपंचमस्तदनंतरम् ।
शुद्धधः शुद्धनिः पश्चान्निषादःकैशिकी ततः ॥

षड्जः पतादिरित्येते प्रोक्ता मन्द्रस्वरा मया ।
पुरोदितासु सारीषु तंत्रीभिश्च चतसृभिः ॥

अनुमंद्रास्तथा मंद्राः प्रोद्दिष्टास्ते स्वयं भुवः ।
स्वीयकल्पनया प्रोक्ताः प्रामाण्यं तेषु विद्यते ॥

गुरुणा मे यथोद्दिष्टा वीणायां सुप्रपंचिताः ।
अत एवान्यथा कर्तुं भुवि को भवति क्षमः ॥
सवादिनौ स्वरौ योज्यौ सर्वत्रापि परस्परम् ।
मध्ये तारेऽतितारेऽपि योजनीया यथाक्रमम् ॥
अंतरे कथिता नैव सारी काकलिनि स्वरे ।
सांकर्यं जायते यस्मात्पानुकूल्य भवेत्ततः ॥
अंतरस्य स्वरस्यापि सूक्ष्मः काकलिनो ध्वनिः ।
विचार्यो विज्ञवर्येण पतादिषड्जमध्ययोः ॥
पतादि समयोः सामावेकैकश्रुतिवर्जितौ ।
अतर-काकली स्यातां तयोःप्रतिनिधी च तौ ॥

These verses clearly show that Sri Kantha had read the southern authorities Swara Mela Kalanidhi and Raga Vibodha.

The प्रतिनिधि theory by which "antar" and "kakali" notes were represented by च्युत or पत ma and च्युत or पत sa, was known to Sri Kantha, and he mentions it in his work. In the southern music system of the present day, the notes antar and kakali represent च्युत ma and च्युत sa.

The shuddha thata of Sri Kantha is Mukhari which coincides with the southern shuddha scale. The author says:

यत्र शुद्धस्वराः सप्त भवेयुर्भित्तरजकाः ।
स स्यान्मुखारिका मेलः सजातीया भवत्यतः ॥

He finds the shuddha scale, चित्तरजक but the Mukhari raga from it, he did not find so easy apparently.

सन्यासांशग्रहा पूर्णा मुखारी गीयते सदा ।
कतिचिद्गमकैर्युक्ता कष्टसाध्या सुबुद्धिभिः ॥

The importance of remembering the देवतात्मक रूप or picture of the raga, is mentioned as under.

ध्यानं विना रागसमूहमेत ।
गायंति रागेऽनिपुणा जना ये ॥
संगीतशास्त्रोक्तफलानि रागाः ।
तेभ्यः प्रयच्छन्ति कदापि नैव ॥

Chart showing the nine thatas of Shrikantha with their Swaras:—

थाट नाम	स्वराः	हिंदुस्थानि स्वराः
	सा री ग म प ध नी	
१ मालव गौड	सा, रीशुद्ध, पतम, शुद्धम, शुद्धप, शुद्धध, पतसा	सा री ग म प ध नि सां
२ श्री	सा, चतुश्रुतिरी, साधारणग, शुद्धम, शुद्धप, चतुःश्रुतिध, कैशिकानि	सा री ग म प ध नि सां
३ शुद्ध नाट	सा, त्रिश्रुतिग, पतम, शुद्धम, शुद्धप, त्रिश्रुतिनि, पतसा	सा ग ग म प नि नि सां
४ कर्णाट गौड	सा, शुद्धग, पतम, शुद्धम, शुद्धप, शुद्धनि, कैशिकानि	सा री ग म प ध नि सां
५ केदार	सा, शुद्धग, पतम, शुद्धम, शुद्धप, शुद्धनि, पतसा	सा री ग म प ध नि सां
६ मल्हार	सा, शुद्धग, पतम, शुद्धम, शुद्धप, त्रिश्रुतिनि पतसा	सा री ग म प नि नि सां
७ देशाक्षी	सा, त्रिश्रुतिग, पतम, शुद्धम, शुद्धप, शुद्धनि, पतसा	सा ग ग म प ध नि सां
८ कल्याण	सा, शुद्धग, साधारणग, पतप, शुद्धप, शुद्धनि, पतसा	सा री ग मं प ध नि सां
९ सारंग	सा, शुद्धग, { शुद्धम, शुद्धप, कैशिकनि, पतसा पतप. }	सा रीं म मं प नि नि सां त्रिशुद्धौषडजगांधारौ तथा मध्यमपंचमौ पताघौच समौ (समौ ?) यत्र निषादः कैशिकी पुनः

मेल	जन्य जनक राग व्यवस्था
१ मालव गौड	१ मालव गौड २ सौराष्ट्र ३ गुर्जरी ४ मल्हारी ५ बहुली ६ पाडी ७ गौडपंचम ८ भैरव ९ कर्णाट बंगाल (१०) ललित (११) गौडी. This is the भैरव थाट of Hindustani Music.
२ श्री	१ श्री २ मालवश्री ३ धनाश्री ४ भैरवी ५ देवगांधार. This is the Northern Kaphi Thata.
३ शुद्ध नाट	१ शुद्ध नाट.
४ कर्णाट गौड	१ कर्णाट गौड. This Thata will correspond with the Northern Khamaj.
५ केदार	१ बिलावली २ नटनारायण ३ शंकराभरण. This is the Hindustani Bilawal Thata.
६ मल्हार	१ गौड मल्हार २ कामोद.
७ देशाक्षी	१ देशाक्षी.
८ कल्याण	१ कामोद २ हमीर. .
९ सारंग	१ सारंग.

शुद्ध रि & शुद्ध ध	Northern	कोमल रि & कोमल ध
शुद्ध ग & शुद्ध नि	,,	तीव्र रि & तीव्र ध
साधारण ग & कैशिक नि	,,	कोमल ग & कोमल नि
पञ्चश्रुति, पवम & पवप		तीव्रतम नि, तीव्रतम ग & तीव्रतम म
त्रिश्रुति ग & त्रिश्रुति नि		कोमल ग & कोमल नि

After dealing with the Raga the author proceeds to some matters of general interest.

रागास्ते त्रिविधाः प्रोक्ताः शुद्धच्छायालगास्तथा ।
सङ्कीर्णाश्च पृथक् तेषां लक्षणं प्रतिपद्यते ॥
अन्यै रागैर्नयुक्तास्ते रागाः शुद्धाःप्रकीर्तिताः
छायालगा मताः प्राज्ञैः पररक्तियुताश्च ये ॥
द्वयो रक्तियुता ये तु सङ्कीर्णास्ते निरूपिताः ।

The author does not say which Ragas come under each of these classes and why.

The Qualifications of male and female Singers are mentioned as follows :—

नानारागकलाकलापकुशला बिंबाधरेणोज्ज्वलाः ।
गायिन्योऽखिलगीतवाद्यनिपुणास्ताले हि दक्षा लये ।
रम्याः कोकिलकंठमञ्जुलतरध्वानाः प्रगल्भा रसे ।
साक्षात् कामजयश्रियः सदसिताः शोभां परां तन्वते ।
श्वचत्पाणिपरिस्फुरन्मणिलसत्केयूरमामान्विताः ।
वीणावादनचातुरीचयचमत्कारैः समामोहिनी ।
श्रीखंडागरुकेसरोज्ज्वलरसैरत्यन्तमास्वत्तनुः ।
कौशेयांबररंजितातिमधुरा गाने रता गायिनी ॥
त्रिस्थानालापदक्षो गमकलयकलाकाकुविज्ञोऽतिधीरोऽ ।
नन्यांशी दोषरिक्तः सकलजनमनोरंजकः सावधानः ।
शुद्धच्छायालगज्ञः भ्रमरहिततनुः कोकिलस्पर्धकंठः ।
तालाभिज्ञो महज्ञः सुभुवि निगदितो गायकानां वरेण्यः ।

The different classes of Singers are described in the following Shlokas :—

रतं यो शिक्षते गीतं विभ्रमं प्रांजलं तथा ।
शुद्धे वा सालगे सम्यक् शिक्षाकारः स उच्यते ॥
सुभाव्यं गीतमाकर्ण्य यो भवेत्पुलकान्वितः ।
सानंदोऽश्रुमिराकीर्णो रसिको गायकः स्मृतः ॥

नीरसं सरसं कुर्वन् निर्भावं भावसंयुतं ।
ज्ञात्वा श्रोतुरभिप्रायं यो गायेत् सतु भावुकः ॥
मनोहरति गीतेन विदित्वा श्रोतुराशयम् ।
रंगं गीते विधत्ते यो रंजकः सोऽभिधीयते ॥
यथा शास्त्रप्रयोगेण मार्गं देशीयमेव च ।
यो गायति क्रियाक्षेमात् कथ्यतेऽसौ क्रियापरः ॥
स्वरो वर्णश्च तालश्च स्पष्टं घाटयति स्वयं ।
सुन्दरध्वनिसंयुक्तः सुघटं तं प्रचक्षते ॥
गीतादिषु द्विधालप्तिं कुर्यात् सौख्यविधायिनीं ।
आलप्तिगायकः सोऽयं निर्दिष्टो गीतवेदिभिः ॥

आलप्तेरपि यद्गीतं भवेदतिमनोहरं ।
उक्तो गायकभेदज्ञैः सोऽयं रूपकगायकः ॥
नानाविधं विभक्तं च ध्वनौ यस्य भवेद्गतम् ।
निबंधः सतु विज्ञेयो गीततत्त्वविचक्षणैः ॥
रागे रागांतरच्छाया मिश्रणेदोषवर्जितः ।
प्रवीणत्वेन सगायन् बुधैर्मिश्र उदाहृतः ॥

गायकदोषाः ।

रसानुरूपरागाणामज्ञत्वमविदग्धता ।
ग्राम्योक्तिरपशब्दश्च प्रबंधस्थानहीनता ॥

त्रिविधकाकुभेदाः ।

श्रुतिमानाधिकतया रागे स्वरस्य कुत्रचित् ।
छाया या दृश्यते तां तु स्वरच्छायां जगुर्बुधाः ॥
या रागस्य निजच्छाया रागच्छायां तु तां विदुः ।
रागे रागांतरच्छाया सैव स्यादन्यरागजा ॥
रागस्योत्पत्तिभूक्षेत्रं शरीरं जगदुर्बुधाः ।
तस्यैवानुकृतित्वाच्च क्षेत्रच्छायेति सा मता ॥
वीणावंशादियंत्रोत्था वंशच्छाया स्मृता बुधैः ।
देशच्छायोत्थिता रागे देशच्छायोच्यते बुधैः ॥

Shrikantha then describes the old स्वरथान चतुष्टय of the ancient writers and adds :—

सर्वगीतप्रबंधानामादावालप्तिरिष्यते ।
आलप्तिः सा द्विधा प्रोक्ता विषमा सरला तथा ॥
साक्षरा नाक्षरा सापि चतुर्धा भिद्यते ततः ।
सतालातालभेदेन चतुर्धाप्यष्टधा ततः ॥

It is quite possible that Shrikantha like Pundarika Vithala came from the Southern Presidency and then settled in Kathiawar :—

The Works of Bhava Bhatta Pandit

We shall now proceed to consider the three works of Pandit Bhavabhatta, namely Anupa Sangita Vilas, Anupa Ratnakara, and Anupankusha. Bhavabhatta was in the service of the Rathod Rajput King Anupa Singh, the son of Karan Singh of Bikaner. Anupa Singh was a contemporary of the Emperor Aurangzeb Bhavabhatta's father, Janardan Bhatta was in the service of the Emperor Shah Jehan, the great Mogul-Emperor of Delhi It is quite possible that during the reign of Aurangzeb, who was not over fond of music, the Court musicians of Shah Jehan, got scattered and Janardan Bhatta or his son Bhava Bhatta took service at Bikaner Bhava Bhatta in his Anupa Vilasa, mentions his family and residence as follows —

कृताञ्जलिपुटो भूत्वा नमस्कृत्य द्विजोत्तमान् ।
सबहुमानमाहूय प्रस्थापितः स्वदासेन ॥
ततः पप्रच्छ तं राजा नामगोत्रकुलानि च ।
क्षणं विमृश्य तत्सर्वं भूते भावः सविस्तरम् ॥
कृष्णात्रगोत्रसम्भूतं कुलमाभीरदेशजम् ।
पुरधवलमित्याहुः प्रपिता तानभट्टकः ॥
पिता जनार्दनः साक्षाज्जनार्दन इवापरः ।
मातुः स्वप्नभवा नाम भाविपुत्रः स्वपूर्वजैः ॥
विख्यातो मानसो भावः पदवी भट्टसंज्ञिका ।
भट्टः पूज्ये स्मृतः कोशे श्रीमदमरकोशके ॥
तेनेद भावभट्टेनि कीर्तितं शास्त्रमद्भुतम् ।
तौर्यत्रिकं तु संगीतं सर्वानी तत्र उच्यते ॥
धनश्यामेन चालुक्यचक्रवर्तीति कीर्तितम् ।
श्रीमत्साहिजहांभूपतिलकोद्भूतमानुना ॥
श्रीमत्साहिसुजाभूपदत्त रायपदं ततः ।
श्रीभावभट्टसंगीतरायानुष्टुप्चक्रवर्ती ॥
एवं नाथेद जाते श्रीमदनूपविभो मम ।

It would thus appear that the poet was born in Dhavalpur in the Abhir district, (Malwa). He was a Brahmin by caste and his gotra was Krishnatra. His mother's name was Swapnabhava and his father's name was Janardan Bhatta Janardan Bhatta was given by the Emperor Shah Jehan, the title of Sangeeta Raj. According to research scholars, Anupa Singh ruled in Bikaner from 1674 A D to 1709 A.D. Bhava Bhatta's own title was "Anushtupa-Chakravarti-Sangeeta-Rai." The whole material of the Swaraadhyaya of Anupa Vilas has been borrowed from the Sangeeta Ratnakara of Sharang Deva The author does not give us the impression that he clearly followed the theories of

the Ratnakara. He quotes from several other treatises both anterior and subsequent to the Ratnakar. It is said by some of our modern scholars that Pandit Bhava is more of a compiler than an original author. To some extent, I think they are right. In the Anupa Vilas, the author, after describing "Nada" and "Sangeeta" in the usual way, copies the whole of the पिंडोत्पत्तिप्रकरण from the Ratnakara, under the name शरीरभावप्रकाश. Next he deals with the theory of the productions of 'Nada'. Then comes the description of the 22 srutis and the swaras based on them. He brings in a lot of unnecessary detail from the commentary of Kallinath too, on the sruti-swara, Prakarana. Srutis are divided into two classes "gatraja", and "yantraja".

कैश्चिदन्यानि नामानि श्रुतीनां कथितानि तु ।
तन्मते गात्रजाश्चोर्ध्वं यंत्रजाश्चापरा मताः ॥

The usual तीव्रा, कुमुद्वती, मंदा, छंदोवती । and others are the 'गात्रज' Shrutis; the Shrutis are,

निष्कला	रसगीतिका (न्हस्वगीतिका)	नादांता
गूढा	रंजिका	सौम्या
सकला	पूर्णा	भाषांगिका
मधुरा	अलंकारिणी	वार्तिका
ललिता	वैणिका	व्यापका
एकाक्षरा	वालिता	प्रसन्ना
श्रृंगजाति	त्रिस्थाना	सुभगा
		नंदना

The distinction between the sruti and the swara is attempted to be explained by quotations from Parijata, Ratnakar, Sringara-har, and Raga Kutuhala. It is not necessary to go into these quotations here. Each of the seven swaras is then described with its picture, presiding deity, "dwipa," in a wealth of detail, of hardly any practical use. The definitions of 'grama', 'murchhana', 'jati', 'varna', 'shuddha tana', 'kuta tana', and 'alankara', are all taken from the Sangeeta Ratnakara and the Parijata. Sharangdeva Pandit in the description of his vikrit swaras has used the term 'chyuta' and with reference to it, Bhava Bhatta says :—

ग्रामस्वरो मेरुसंस्थो ध्रुवत्वात्स्यात् कथं च्युतः ।
च्युतस्यापि कथं तस्याच्युतत्वं परिकीर्तितम् ॥
उच्यते भावभट्टेन ग्रामस्वरश्रुतिर्नहि ।
षड्जग्रामे मध्यमस्य षड्जस्यापि च मध्यमे ॥
भिन्नग्रामे च्युतिरस्ति स्वग्रामे न कदाचन ।

This only shows that Bhava Bhatta was unable to follow the music system expounded by Sharangdeva. There is reason to believe that the suddha thata of Bhava Bhatta was the same as that of Pundarika. It is no doubt extremely difficult to find out what was really the author's own system. I admit, he adds in some places the expression स्वमते to the quotation But the question what was his own system of music still remains.

On the question of the vikrita swaras, Bhava Bhatta says :—

द्वादशविकृतान् पूर्वे वदति तत्नु पृथक् पृथक् ध्वनितः ।
सप्तैव स्युर्भिन्ना नपंच यदिमे समस्वनयः ॥ रागविबोधे ।

चत्वारिंशत्सु ते प्रोक्ता द्व्यधिका मातसमताः ॥

All these forty-two vikritas, are based on the twenty-two srutis which form the basis of the system We have already seen that Ahobala had twenty-nine swara names Bhava Bhatta goes a step further, and adopts forty-two swara names Strangely enough, he omits to say anything about these vikritas in his raga descriptions

In the Raga Adhyaya, the Pandit begins by mentioning the 234 ragas of the Sangeeta Ratnakara by name and then turns to those of the Sangeeta Parijata. The "upanga ragas" of Bilawal, Kedar, Gouri, Purya, and so forth deserve notice On the different varieties of Kanada, he gives us two excellent Hindi, "sawais", which are —

जो दरबारि सो सुद्ध कहावे मलारमिलायके नायकि जानो ।
बागेसरी धनासिरिके मिले मेघमिले तैं अडाना जानो ।
होत सहानो मिले फरदस्त के पूरिया जेतसिरीसुरधानो ।
मंगल अष्टक सोहि कहावत भावकहे षटभेदनजानो ॥
मुद्रिकगारोहुसेनिओकाफीमिलेविध भेदबखानत हैजू ।
सोरटि और खंबावतिसों मिले द्वादशभेदयोंमानत हैजू ।
कर्नाटगौर ओ कर्नाटभेद द्वैयो मुनिभेद बखानत हैजू ।
मूरछना ग्रहअंसओ न्यासवि भेल मिलापविजानत हैजू ।

These two verses throw a good deal of light on the Hindusthani varieties of the Kanada Raga

In the Anupa Vilas, the Pandit deals with about 70 ragas. In defining each raga, he quotes the opinion of the following treatises :—

(१) संगीतरत्नाकर (२) संगीत पारिजात (३) संगीत दर्पण (४) सर्वार्णरागाध्याय (५) नृत्यनिर्णय (६) हृदयप्रकाश (७) रागमंजरी (८) रागतत्त्वविबोध (९) सद्रागचंद्रोदय (१०) रागविबोध.

He leaves his readers to find out the Thatas and the Swaras of the Ragas for themselves.

We have already discussed some of the authorities of Bhavabhatta. The Ragas described by Bhavabhatta in the Anupa Vilas are:—

अडाना	तुरुष्कतोडी	भूपाली	विभास
अजन	तोडी	भैरव	विहंगड
आसावरी	त्रावणी	भैरव भेद	वेलावली
कल्याण	दीपक	भैरवी	शंकराभरण
कामोद	देवगांधार	मंगलकौशिक	श्यामनाट
कामोजी	देशकार	मंजुघोषा	शुद्ध नाट
कोल्हास	नट	मल्लारी	श्री
केदार	नटनारायण	मालवश्री	सामंत
कुकुभ	नीलांबरी	मालव कौशिक	सारंग
गुर्जरी	नारायण गौड	मालवी	सिंहरव
गौडसारंग	पटमंजरी	मुखारी	सुरालय
गौरी	परज	मेघनन्द	सुघराई
घंटारव	पहाडी	रक्तहंस	सुहवी
चक्रधर	बंगाल	ललिता	सैंधवी
छायानट	बहुली	वराटी	सौराष्ट्री
जयावन्ती	बंगाली	वर्णनाटः	हंमीर
जैतश्री	भिन्नषड्ज	वसंत	

With the exception of the Ratnakara and Sangeeta Darpana all the authorities quoted by the author have been discussed in this paper and it will therefore not be very difficult to determine the Thatas and the forms of their Ragas.

Anupa Sangita Ratnakara

In the swara adhyaya of this work again, Bhava Bhatta gives us nothing original on the question of sruti, swara, grama, murchhana, tana, varna, and alankara. He copies almost everything from the Sangeeta Ratnakara. "Alapti", "dhrupada" and "quada" are defined as under.

वर्णालंकारसंपन्ना गमकस्थायचित्रिता ।
आलप्तिरुच्यते तज्ज्ञैर्बहुवैचित्र्यसंयुता ॥
अथ ध्रुवपद लक्षणम् ।
गीर्वाणमध्यदेशीयभाषासाहित्यराजितम् ।
द्विचतुर्वाक्यसंपन्नं नरनारीकथाश्रयम् ॥

शृङ्गाररस भावाद्य रागालापपदात्मकम् ।
पादांतात् प्रासयुक्त पादांतयुगकं च वा ॥

प्रतिपाद यत्र बद्धमेव पादचतुष्टयम् ।
उग्दाहध्रुवका भोगान्तरं ध्रुवपदं स्मृतम् ॥

अथ क्वाड लक्षणम् ।

कामिचालानुपक्रम्य प्रयोगबहुलद्रुतान् ।
संकीर्णानेकगतिभिः प्रवृत्तं सुमनोहरम् ॥

क्रुआडाल्यां च तद्गुणैः तालरूप विचक्षणः ।
अन्यच्चैकादिद्विचतुस्तालानां मेलन मिथः ॥
क्रियालयविभागेन क्रुआडः परिकीर्तितः ॥

These definitions may be found somewhat interesting and instructive. In the Raga Adhyaya the varieties of some of the popular ragas are enumerated as follows :—

अथनाटप्रभेदानामुद्देशः क्रियतेऽधुना ।
शुद्धनाटोऽथ सालंगनाटश्छायादिनाटक. ॥

केदारादिकनाटश्च तथा कल्याणनाटकः ।
तथाभीरकनाटश्च वराटीनाटकस्तथा ॥

ततः सारंगनाटश्च ततः कामोदनाटकः ।
वर्णनाटश्च विभ्रासनाटो हंमीरनाटकः ॥

कदंबनाटकः पूर्वानाटः कर्णाटनाटकः ।
पूर्वाकर्णाटकोऽप्यत्रनाटभेदाःप्रकीर्तिताः ॥ इतिनाटाः ।

शुद्धकर्नाटरागश्च कर्णाटो नायकी ततः ।
बागीश्वर्यादि कर्नाटः कर्णाटोऽड्डाणपूर्वक. ॥

ततःसाहानाकर्णाटः पूरियादिस्ततःपरम् ।
ततो मुद्रिककर्णाटो गाराकर्नाटकस्ततः ॥

हुसेनीपूर्वकर्णाटः काफीकर्णाटकस्ततः ।
सोरठीपूर्वकर्णाटः खबावत्यादिकस्ततः ॥

ततः कर्णाटगौडः स्यात् । कर्णाटास्ते चतुर्दश ॥

Then follow the varieties of Kalyana, कल्याण, बिलावली, तोडी, गौरा, गौड, वराटी, आसावरी, केदार, बिहगडा, सारंग, भैरव, कामोद, गुर्जरी, सैंधवी मलार. It will be useful for the music scholars to make an attempt to collect and preserve in a central place old songs of these varieties from the living artists in the country.

All this will show that Hindusthani music was going through wonderful changes and that there were great artists in those Mahomedan times. I only wish Bhava Bhatta had taken the trouble to carefully define or describe all these "upanga ragas". His omission has left us, no doubt, in a very unfortunate position. It appears he was a great admirer of Pundarika. In the Raga-Adhyaya of Ratnakara, he has practically adopted the raga classification of the Raga Manjari of that writer. He says :—

टोडीगौरीवराटीनां केदारशुद्धनाटयोः ।
मालवाकैशिकाख्यस्य श्रीरागस्य ततः परम् ॥
हमीरहेमकल्याणौ देशाक्षी देशिकारकः ।
सारंगस्य च कर्णाटः स कामोदो हिजेजकः ॥
नादरामक्रिहिंदोलौ मुखारी सोमरागकः ।
एतेषां मेलसंजातरागाणां च यथायथम् ॥
लक्षणं वक्ष्यते किंतु लोकवृत्तानुसारतः ॥

Then these thatas with their proper swaras and their janya ragas are faithfully copied from the Manjari. Be it stated here that Bhava Bhatta does not conceal the fact that he has copied these all from the Manjari. He then gives the definitions of some of our popular ragas, and while giving them, he cites as authorities the opinion of other granthas. All the three works of Bhava Bhatta are printed and published now, and so we shall not go into the details of his ragas. We have fully discussed almost all his authorities and so the swara and other details of these ragas will be easily followed by the reader. Bhava Bhatta has added hundreds of old dhrupadas under the different ragas. But as they are not set to any notation, I have not thought it fit to include any of them here. Many of these no doubt can be fitted to music by some of our eminent artists.

Anupa-Ankusha

This is comparatively a small work. In the sruti-swara prakarana the author says:—

सरिगमाः पधौ नीति सरिगमाः पधौ नि च ।
सरिगमाः पधौ नीति स्थानत्रयमिदं जगुः ॥
प्रथमं सप्तकं मंद्रं द्वितीयं मध्यमं स्मृतम् ।
तृतीयं तारसंज्ञं स्यादेवं स्थानत्रयं मतम् ॥
मंद्रादर्धं तु मध्यं स्यान्मध्यार्धं तारसप्तकम् ।
उत्तरोत्तरसंकोचस्तवाकाशे भवतिस्फुटम् ॥

सममागप्रकल्पोऽत्र न साधु मन्यते बुधैः ।
तस्माद्भागास्तु विषमाः कल्पिता भरतादिभिः ॥

षट्षष्टिगाः श्रुतयोऽप्यत्र स्युस्थानत्रयसमागमे ।
द्वाविंशतिप्रभेदेन संख्या द्वाविंशतिर्मता ॥

The sruti is defined thus—

स्वरूपमात्रश्रवणान्नादोऽनुरणनं विना ।
श्रुतिरित्युच्यते भेदास्तस्या द्वाविंशतिर्मताः ॥

The ancient writers are fond of defining the sruti as a sound devoid of "anuranan". When a shruti has the "anuranan" added to it, it becomes a swara I do not think they had any clear notion of this fine distinction This leads to the question what is "anuranan" Some of our modern scholars, read the modern "harmonics" into that ancient term. I do not think, of course their view is right The ancients so far as could be judged from their writings had no knowledge of our modern harmonics, "Anuranan" according to them was nothing more than a prolonged or sustained note Pandit Kallinatha I think, in one place calls it "pratidhwani". In the vadyadhyaya while describing the different "guna's or qualities of वंश प्रकरण in the फूत्कार Sharangdeva says—

स्निग्धता घनता रक्तिर्व्यक्तिः प्रचुरता ध्वनेः ।
लालित्य कोमलत्व च नादानुरणन तथा ॥
त्रिस्थानत्वं श्रावकत्व माधुर्य सावधानता ।
द्वादशेति गुणाः प्रोक्ताः फूत्कारे सुधिशार्ङ्गिणा ॥

Kallinath explains the "anuranan" referred to here in his commentary on the Ratnakara, at page 251 A 'nada' accompanied by its "anuranan", he calls श्लक्ष्णनाद. And says—

श्लक्ष्णस्तु तैलधारावत् अच्छिद्रो धीरसमतः । रत्नाकरे ।

This evidently is not what we understand by the modern Harmonics.

In the Raga Adhyaya of the Sangeeta Anupankusha, Bhava Bhatta adopts the classification of the ragas given in the Sangeeta Darpana and without taking the least trouble to solve these ragas according to the definition given in that book, cites under each raga, the opinions of Sangeeta Parijata, Hridaya Prakasha and Raga Manjari. This is no doubt unpardonable and even misleading But we do not know what the motive of the author really was in resorting to this procedure and so can give no further explanation. To illustrate—

श्रीमज्जनार्दनं नत्वा संगीतार्थफलप्रदं ।
तन्मते भावभट्टेन रागालपनमंजरी ॥
भैरवः कौशिकश्चैव हिंदोलो दीपकस्तथा ।
श्रीरागो मेघ रागश्च षडेते पुरुषाः स्मृताः ॥
मध्यमादिर्भैरवीच बंगाली च वराटिका ।
सैंधवी पंचमी प्रोक्ता भैरवस्य वरांगनाः ॥
टोडी खंबावती गौडी गुणक्री ककुभा तथा ।
मालकौशिकरागस्य योषितः पंच कीर्तिताः ॥

इ. इ. इ.

अथ भैरवः ।

पारिजाते—भैरवे तु रिपौ नस्तो धादिमे न्यासमध्यमे ।
तथोक्तौ तु गनी तीव्रौ कोमलो धैवतः स्मृतः ॥
हृदयप्रकाशे—संपूर्णो भैरवः प्रोक्तो गांधारादिक मूर्च्छनः
मंजर्याम्—रिहीनो भैरवः सत्रिः प्रातर्गेयो मुनीश्वरैः ॥

अथ मध्यमादिः ।

पारिजाते—मध्यमादौ धगौ नस्तो मूर्छना मध्यमादिका
तत्र त्वंशस्वराः प्रोक्ता रिमनयो मुनीश्वरैः ॥
मत्रिः प्रातरसौ गेया रिधास्त मध्यमादिका ॥
हृदयप्रकाशे—मध्यमादिर्गहीनत्वात् षाडवा मध्यमादिका ॥

This procedure is most ridiculous. *It* certainly is not such as would enhance the reputation of a scholar, who adds to his name the title of "Anushtupa-Chakravarti-Sangeeta-Rai".

Many of these definitions will be contradictory and leave the reader at sea.



SWARA-MELA-KALANIDHI

Having finished the leading ancient authorities on the Northern system of Music, we shall now turn our attention to those of the Southern system. So far as I can judge, there are only five of them which deserve special attention and these are —

स्वरमेल कलानिधि, रागविबोध, संगीतसारामृत, चतुर्दंडिप्रकाश and रागलक्षणम्

It is rightly claimed by the southern musicians that their music has kept a faithful touch with their ancient works I do not think they claim that they sing the music of Sharangdeva now But I do believe they will be in a position to show that their music has a long tradition of three or four centuries behind it Some of their ragas, I am told, have lately got mixed up with our northern ones But these do not affect the great system which they have inherited from their ancient writers The first southern work which we shall take up for discussion will be the Swara-Mela-Kalanidhi. This book was written by Rama Amatya in shaka year 1472 corresponding with 1550 A D The date of the work as given by the author is as follows —

शाके नेत्रधराधराब्धिधरणीगण्येऽथ साधारणे ।
वर्षे श्रावणमासि निर्मलतरे पक्षे दशम्यां तिथौ ॥

According to this the actual date comes to be Shravan Shuddha 10th, of the year named SADHARANA The work, therefore, is more than 350 years old Barring the commentary of Kallinatha on the Sangeeta Ratnakara, no other complete work is at present available to show the development of music between the Ratnakara and the Swara Mela Kalanidhi, and we are therefore not in a position to say anything definite about the music of that period There is, however, some evidence in the commentary of Kallinath to show that he was a southern musician and that his music system was not different from that of Rama Amatya, and the other subsequent writers We shall come to that point after we finish with the Swara Mela Kalanidhi Rama Amatya divides the book into five chapters, namely:

(१) उपोद्घात प्रकरण (२) स्वर प्रकरण (३) वीणा प्रकरण (४) मेल प्रकरण (५) रागप्रकरण.
In the swara-prakarana, the author after dividing music into the two divisions "gandharav" and "gana", defines these technical names thus:

अनादिसंप्रदायं यद्गंधर्वैः संप्रयुज्यते ।
नियतं श्रेयसो हेतुस्तद्गां धर्वं प्रचक्षते ॥
यत्तु वाग्गेयकारेण रचित लक्षणान्वितम् ।
देशीरागादिषु प्रोक्तं तद्गानं जनरंजनम् ॥

Translation.—"Gandharva" music is the music that has come down to us from times immemorial. Its only object is the salvation of man. It is sung and played by the Gandharvas (celestial Musicians) only. The music which is composed by our learned men and which has modern rules and which is expressed in deshi ragas is called "gana". It is intended to please men.

Observation.—The suggestion is that all the ragas which we now sing will be "deshi" music only and not "margi". The rules of "gandharva" music were most rigid and could never be violated. Not so the rules of "gana" music.

तत्र लक्ष्मानुरोधेन गांधर्वं संप्रयुज्यते ।
यत्र लक्ष्मपरित्यागे प्रत्यवायो न विद्यते ॥
तस्माल्लक्ष्यप्रधानं तत्तु लक्ष्मप्रधानकम् ।
परित्यागेऽत्र लक्ष्यस्य रजनं नैव जायते ॥
तस्माल्लक्ष्यानुरोधेन गानं लोके प्रवर्तते ॥

The author has evidently taken this distinction between Gandharva and gana from the Ratnakara. Sharangdeva in the Vadyadhyaya of his Ratnakara says :—

यद्वा लक्ष्यप्रधानानि शास्त्राण्येतानि मन्वते ।
तस्माल्लक्ष्यविरुद्धं यत्तच्छास्त्रं नेयमन्यथा ॥

The author then proceeds to the twenty two srutis and the seven shuddha swaras. He does not name the srutis. The distribution between the srutis and the swaras is the old one.

तत्र तुर्यश्रुतौ षड्जः सप्तम्यांमृषभो मतः ।
ततो नवम्यां गांधारस्त्रयोदश्यां तु मध्यमः ॥
पंचमः सप्तदश्यांतु धैवतो विंशतिश्रुतौ ।
द्वाविंश्यां तु निषादः स्यात् श्रुतिष्वित्थं स्वरोद्भवः ॥
एते षड्जादयः सप्तस्वराः शुद्धाः प्रकीर्तिताः ।
विकृताश्चैत्र सप्तैवेत्येवं सर्वे चतुर्दश ॥

Rama Amatya recognises seven shuddha and seven vikrita swaras. The importance of this work to the music scholar lies in the

fact that Rama Amatya tries to connect some of his ideas with those of Sharangdeva About his vikritas, Rama Amatya says as follows He anticipates a question and answers it thus.—

नतु रत्नाकरे शाङ्र्गदेवेन विकृताः स्वराः ।
द्वादशोक्ता कथ ते तु सप्तैव कथितास्त्वया ॥

Translation—Sharangdeva Pandit in his Ratnakara lays down twelve vikrita notes How do you say they are only seven? Answer —

सत्य लक्षणतो भेदो द्वादशानामपीष्यते ।
शुद्धेभ्यस्तत्र भेदस्तु सप्तानामेव लक्षित· ॥

Translation—True, technically speaking there will be twelve vikrita swaras, but there are as a matter of fact only seven vikritas really distinct from the shuddha swaras

Observation—He means to say that the remaining five are only different names for the shuddha swaras.

The test of a vikrita, laid down by the author is—

आधारश्रुतिसत्यागाद्ध्वनिभेदः प्रकीर्तितः ॥

He then shows, how some of the vikrita swaras fail to satisfy the test, and need not be recognised as separate vikritas

शुद्धषड्जाच्च्युतस्तु सषड्जो नैव भिद्यते ।
अच्युतो मध्यमः शुद्धान्मध्यमाच भिदां भजेत् ॥
शुद्धर्षभाच्च विकृतो ऋषभो न पृथग्भवेत् ।
विकृतो धैवतः शुद्धाद् धैवताद्नातिरिच्यते ॥
मध्यमश्रुत्युपादाने विकृतः पंचमस्तु यः ।
विकृताच्चैव पंचमात्स भेद चाश्नुते ध्रुवम् ॥

It will not be permissible to go here into the reasoning of Rama Pandit because we have omitted the Sangeeta Ratnakara from our present discussion.

The following chart will clearly show the positions of the shuddha and vikrita swaras of Rama Amatya.

श्रुतिनाम	शुद्ध स्वर	विकृत स्वरनाम	हिंदुस्थानी स्वरनाम	European
१ तीव्रा	...	कैशिक निषाद	कोमल निषाद	bB
२ कुमुद्वती	...	काकलि निषाद	तीव्र निषाद	B
३ मंदा	...	च्युतषड्ज निषाद	तीव्रतमनिषाद (if necessary)	
४ छंदोवती	षड्ज	...	शुद्ध षड्ज	C
५ दयावती	...	...		
६ रंजनी	...	...		
७ रक्तिका	ऋषभ	...	कोमल ऋषभ	bD
८ रौद्री	...	...		
९ क्रोधा	गांधार	पंचश्रुति रिषभ	तीव्र ऋषभ	D
१० वज्रिका	...	साधारण ग or षट्श्रुति रि	कोमल गांधार	bE
११ प्रसारिणी	...	अंतर गांधार	तीव्र गांधार	E
१२ प्रीति	...	च्युतमध्यम गांधार	तीव्रतम गांधार (if necessary)	
१३ मार्जनी	मध्यम	...	शुद्ध मध्यम	F
१४ क्षिति	...	...		
१५ रक्ता	...	...		
१६ संदीपिनी	...	च्युतपंचम मध्यम	तीव्र मध्यम	F#
१७ आलापिनी	पंचम	...	शुद्ध पंचम	G
१८ मदंती	...	...		
१९ रोहिणी	...	...		
२० रम्या	धैवत	...	कोमल धैवत	bA
२१ उग्रा	...	...		
२२ क्षोभिणी	निषाद	पंचश्रुति धैवत	तीव्र धैवत	A
१ तीव्रा	...	कैशिक निषाद षट्श्रुति धैवत	कोमल निषाद	bB
२ कुमुद्वती	...	काकली निषाद	तीव्र निषाद	B
इ. इ.				

With the help of this chart, the following descriptions of the vikrita swaras could be easily followed

समानां विकृतानां तु संज्ञा लक्ष्म च ब्रूमहे ।
च्युतषड्जश्च्युतोमध्यश्च्युतःस्यात् पञ्चमस्तथा ।
स्यात् साधारणगान्धारोऽन्तरगान्धार एव च ।
स्यात् कैशिकनिषादोऽप्यन्यः काकलिनिषादकः ॥

These are, says the author, the real seven vikrita swaras of Ratnakara His own vikritas, corresponding with these would be the following.—

च्युतषड्जस्वरो लक्ष्ये निषादत्वेन कीर्तितः ।
च्युतषड्जनिषादाभिधानं तस्य विधीयते ॥
च्युतस्य मध्यमस्यापि गान्धारव्यवहारतः ।
च्युतमध्यमगान्धाराख्याऽस्य क्रियते मया ॥
च्युतपंचममाचष्टे लोका मध्यमसंज्ञया ।
अस्माभिः कथ्यते सोऽपि च्युतपंचममध्यम. ॥

Rama retains the remaining four Vikrit names साधारण गांधार, अंतर गांधार, कैशिक नि & काकली निषाद.

Following the modern practice, he gives some parallel names for some of his vikritas,

लक्ष्येऽत्र कुत्रचिच्छुद्धगान्धारस्थानमाश्रयन् ।
ऋषभ.कीर्त्यतेऽस्माभिः पंचश्रुत्यृषभाह्वयः ॥
स साधारणगान्धारस्थानस्थो रिषभो यदि ।
लक्ष्यानुसारतः प्रोक्तस्तदा षट्श्रुतिरेव सः ॥

The same reasoning is to apply to the note dhaivata Thus four new names come in. Namely :—(१) पंचश्रुति ऋषभ (२) षट्श्रुति ऋषभ, (३) पंचश्रुति धैवत & (४) षट्श्रुति धैवत.
It will, however, be seen that these new swara names do not really increase the number of the vikritas, because they are only other names for the old swaras The fourteen swaras of Rama Amatya, therefore, are :—

	श्रुतिनाम	शुद्ध स्वर	विकृत स्वरनाम	हिंदुस्थानी स्वरनाम	European
१	तीव्रा	...	कैशिक निषाद	कोमल निषाद	bB
२	कुमुद्वती	...	काकलि निषाद	तीव्र निषाद	B
३	मंदा	...	च्युतषड्ज निषाद	तीव्रतमनिषाद (if necessary)	
४	छंदोवती	षड्ज	...	शुद्ध षड्ज	C
५	दयावती	...	...		
६	रंजनी	...	...		
७	रक्तिका	ऋषभ	...	कोमल ऋषभ	bD
८	रौद्री	...	...		
९	क्रोधी	गांधार	पंचश्रुति रिषभ	तीव्र ऋषभ	D
१०	वज्रिका	...	साधारण ग or षट्-श्रुति रि	कोमल गांधार	bE
११	प्रसारिणी	...	अंतर गांधार	तीव्र गांधार	E
१२	प्रीति	...	च्युतमध्यम गांधार	तीव्रतम गांधार (if necessary)	
१३	मार्जनी	मध्यम	...	शुद्ध मध्यम	F
१४	क्षिति	...	...		
१५	रक्ता	...	...		
१६	संदीपिनी	...	च्युतपंचम मध्यम	तीव्र मध्यम	F#
१७	आलापिनी	पंचम	...	शुद्ध पंचम	G
१८	मदंती	...	...		
१९	रोहिणी	...	...		
२०	रम्या	धैवत	...	कोमल धैवत	bA
२१	उग्रा	...	...		
२२	क्षोभिणी	निषाद	पंचश्रुति धैवत	तीव्र धैवत	A
१	तीव्रा	...	कैशिक निषाद } षट्श्रुति धैवत }	कोमल निषाद	bB
२	कुमुद्वती	...	काकली निषाद	तीव्र निषाद	B
	इ. इ.				

With the help of this chart, the following descriptions of the vikrita swaras could be easily followed.

सप्तानां विकृतानां तु संज्ञेयं लक्ष्म चक्ष्महे ।
च्युतषड्जश्च्युतोमध्यश्च्युतःस्यात् पचमस्तथा ।
स्यात् साधारणगांधारोऽन्तरगांधार एव च ।
स्यात् कैशिकनिषादोऽप्यन्य· काकलिनिषादकः ॥

These are, says the author, the real seven vikrita swaras of Ratnakara. His own vikritas, corresponding with these would be the following :—

च्युतषड्जस्वरो लक्ष्ये निषादत्वेन कीर्तितः ।
च्युतषड्जनिषादाभिधानं तस्य विधीयते ॥
च्युतस्य मध्यमस्यापि गांधारत्वव्यवहारतः ।
च्युतमध्यमगांधारसंज्ञाऽस्य क्रियते मया ॥
च्युतपंचममप्येवं लोके मध्यमसंज्ञया ।
अस्माभि कथ्यते सोऽयं च्युतपंचममध्यमः ॥

Rama retains the remaining four Vikrit names साधारण गांधार, अंतर गांधार, कैशिक नि & काकली निषाद.

Following the modern practice, he gives some parallel names for some of his vikritas,

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ऋषभ.कीर्त्यतेऽस्माभिः पंचश्रुत्यृषभाह्वयः ॥
स साधारणगांधारस्थानस्थो विषमो यदि ।
लक्ष्यानुसारतः प्रोक्तस्तदा षट्श्रुतिरेव सः ॥

The same reasoning is to apply to the note *dhaivata* Thus four new names come in Namely :—(१) पंचश्रुति ऋषभ (२) षट्श्रुति ऋषभ, (३) पंचश्रुति धैवत & (४) षट्श्रुति धैवत.

It will, however, be seen that these new swara names do not really increase the number of the vikritas, because they are only other names for the old swaras The fourteen swaras of Rama Amatya, therefore, are :—

स्वरमेल कलानिधि स्वर	हिंदुस्थानी स्वर	European
(१) शुद्ध षड्ज	शुद्ध षड्ज	C
(२) शुद्ध ऋषभ	कोमल ऋषभ	bD
(३) शुद्ध गांधार or पंचश्रुति ऋषभ	तीव्र ऋषभ	D
(४) साधारण गांधार or षट्श्रुति ऋषभ	कोमल गांधार	bE
(५) अंतर गांधार	तीव्र गांधार	E
(६) च्युत मध्यम गांधार	Not necessary	
(७) शुद्ध मध्यम	शुद्ध मध्यम	F
(८) च्युत पंचम मध्यम	तीव्र मध्यम	F#
(९) शुद्ध पंचम	शुद्ध पंचम	G
(१०) शुद्ध धैवत	कोमल धैवत	bA
(११) शुद्ध निषाद or पंचश्रुति धैवत	तीव्र धैवत	A
(१२) कैशिक निषाद or षट्श्रुति निषाद	कोमल निषाद	bB
(१३) काकली निषाद	तीव्र निषाद	B
(१४) च्युत षड्ज निषाद	Not necessary	

I have already suggested that the music system which Kallinath, the commentator on the Sangeeta Ratnakara followed was very nearly the same which Rama Amatya and his successors followed later on. In proof of this statement, I would cite the commentary of Kallinath on the Shri Raga of Sharangdeva. There Kallinath says:—

इदानीमधुनाप्रसिद्धरागांगादीनां लक्ष्ये प्रतीतानां लक्षणविरोधानां परिहारार्थमुद्यमः क्रियते। तत्र विरोधोद्भावनाप्रकारस्तावत्। ग्रामद्वयाज्जात्यादिपरंपरयोत्पन्नानामेतेषां रागाणां मध्यस्थानस्थषड्ज मध्यमस्थानयोरेव तत्तन्मूर्छनारंभपक्षाश्रयेण शास्त्रविहिते संभवत्यपि, मध्यमग्रामोत्पन्नानां मध्यमादितोडी प्रभृतीनां च मध्यमध्यमारंभं विहाय मध्यषड्जस्थाने एव आरंभो लक्ष्यलक्षणविरुद्धः। तथा ग्रहस्वराद्य-न्योत्तरस्वराणामभावः। त्रिचतुःश्रुतिकत्वेन ग्रामद्वयभेदकस्य पंचमस्यालोप्यत्वेन प्रयुज्यमानस्यापि सर्व रागेष्वेकरूपता। क्रियांगरामक्रियायां मध्यमस्य पंचमश्रुतिद्वयाक्रमणं, नट्टदेवक्रीप्रभृतिषु ऋषभ धैवतयोरन्तरकाकल्यादिमश्रुतिद्वयाक्रमणेन त्रिश्रुतित्वे शास्त्रविहितेऽपि षड्जमध्यमयोरशास्त्रविहित त्रिश्रुतित्वकरणेन कैशिकयोरवैशसम्। तत्रापि ऋषभधैवतयोर्गांधारनिषादादिमश्रुत्याक्रमणेन प्रत्येकं चतुःश्रुतित्वं वा शास्त्रविहितम्। आंधाल्या लक्षणे पंचमस्य ग्रहांशत्वोक्त्या तथैव प्रस्तारे लिखितेऽपि

लक्ष्ये मध्यमग्रहांशत्वेन प्रयोगः ॥ कर्णाटगौडस्य लक्षणे षड्जग्रहांशत्वोक्तौ लक्ष्ये निषाद ग्रहांशत्वे । ग्रामरागेषु हिंदोलस्य लक्षणेऽव्यक्तत्वेनोक्तरिषत्यागेन प्रयोगः । षाडवौडुवेष्वपि रागेषु क्वचिदंत्य स्वर प्रयोगः । क्वापिजन्यजनकयोर्मेलन भेद, रसादि विनियोगनियमः ।

*　　　*　　　*　　　*　　　*

The rest of the commentary is unnecessary for our purpose The portion cited here shows that only one *grama* was practically recognised in the time of Kallinath All the *murchhanas* were started from the *madhya shadja* The difference of the two *panchamas* in the two *gramas* was ignored In the definition of Shri raga, although *shuddha ga* and *shuddha ni* moved one sruti higher, the next following notes *ma* and *ni* remained stationery and thereby violated the shastra rule which says that in such a case they must become *chyuta* In the case the *ri* and *dha* remain चतुःश्रुतिक but move one sruti up All this indicates to a careful student the fact that Kallinath followed a system not unlike the one followed by Rama Amatya and Somnath (Quaere —Was the music of the Sangeeta Ratnakara actually practised in Kallinath's time? Did he fully understand it? He wrote his commentary nearly two hundred years later. We all know that Kallinath was in the service of Raja Deva, Raja of Vijayanagar, about 1412-1425 A D and wrote his commentary at the request of his patron)

In the second chapter or *prakarana*, Rama Amatya describes his *vina* with his *shuddha* and *vikrita swaras* The following chart will clearly show how the four wires of the *vina* were tuned and how the frets were placed under them .—

शु म	शु. सा	शुद्ध प	शुद्ध सा	मेरु or Bridge
च्युतपंचम म	शु. री	शु. ध	शु. री	प्रथम सारी
शु. प	शु. ग	शु. नि	शु. ग	द्वितीय सारी
शु. ध	साधारण ग	कैशिक नि	साधारण ग	तृतीय सारी
शु. नि	च्युतमध्यम ग	च्युतषड्ज नि	च्युतमध्यम ग	चतुर्थ सारि
कैशिक नि	शुद्ध म	शु सा	शु म	पंचम सारी
च्युतषड्ज नि	च्युतपंचम म	शु. री	च्युतपंचम म	षष्ठी सारी
मंद्र म तंत्री (४)	मंद्र सा तंत्री (३)	अ. मद्र प तंत्री (२)	अनु मंद्र सा तंत्री (१)	

The tuning of the wires is described in the following [illegible] :—

आद्यायां स्थापयेत् षड्जमनुमंद्राभिधानकम् ।
अनुमंद्रः पंचमस्तु द्वितीयायां निवेशयेत् ॥
तृतीयायां तंत्रिकायां मंद्रषड्जं प्रयोजयेत् ।
कल्पयेच्च स्वरं तंत्र्यां चतुर्थ्यां मंद्रमध्यमम् ॥

The Swaras produced by the six frets are described thus :—

आद्यानुमंद्रषड्जाख्यतंत्र्यां शुद्धर्षभो यथा ।
स्यात्तथा सारिका स्थाप्या प्रथमाथ द्वितीयिका ॥
तंत्र्यां शुद्धगांधारसिद्ध्यै स्थाप्याच सारिका ।
तृतीया सारिका स्थाप्या पूर्वतंत्र्यां यथा स्फुटम् ॥
स्यात् साधारणगांधारः स्थाप्या सारी चतुर्थिका ।
च्युतमध्यमगांधारः पूर्वतंत्र्यां यथा भवेत् ॥
शुद्धमध्यमसिद्ध्यर्थं पंचमी सारिका ततः ।
निवेश्या पूर्वतंत्र्यैव षष्ठी स्थाप्याथ सारिका ॥
यथा व्यक्ततया तंत्र्यां च्युतपंचममध्यमः ॥ इ. इ. इ.

The notes produced by the different wires on the six frets are clearly seen in the diagram, and so it is not necessary to cite the remaining verses here. Nor is any translation of the above cited verses necessary.

In the **mela** *prakarana*, Pandit Rama Amatya lays down altogether twenty *thatas* for the classification of his *janya-ragas*. The twenty *thatas* with their *shuddha* and *vikrita swaras* are as follows :—

तत्तद्रागप्रधानत्वान्मेलान् वक्ष्ये क्रमादिमान् ।
सर्वेषु रागमेलेषु मुखारिमेल आदिमः ॥
ततो मालवगौळस्य मेलः श्रीरागमेलकः ।
सारंगनाटमेलश्च मेलो हिंदोलकस्य च ॥
शुद्धरामक्रियामेलो देशाक्षीमेलकोऽपरः ।
मेलः कन्नडगौळस्य शुद्धनाट्याश्च मेलकः ॥
आहरीमेलकश्चैव नादरामक्रियापरः ।
मेलः शुद्धवराळ्याश्च रीतिगौळस्य मेलकः ॥
वसंतभैरवीसंज्ञो मेलकस्तु प्रकीर्तितः ।
केदारगौळमेलश्च हेज्जुज्जीमेलकस्ततः ॥
मेलः सामवराळ्याश्च रेवगुप्तेश्च मेलकः ।
सामंतनाममेलश्च कांबोजीमेलकस्ततः ॥

मेलनाम		मेलगत स्वराः						हिंदुस्थानी स्वराः
	सा	री	ग	म	प	ध	नि	
१ मुखारी	शुद्ध	शुद्ध	शुद्ध	शुद्ध	शुद्ध	शुद्ध	शुद्ध	सा री री म प ध ध सां
२ मालवगौळ	,,	,,	च्युत मध्यम	,,	,,	,,	च्युत-षड्जनि	सा री ग म प ध नि सां
३ श्री	,,	पंच-श्रुति	साधा-रण	,,	,,	पच श्रुति	कैशिक	सा री ग म प ध नि सां
४ मारगनाट	,,	,,	च्यु. म गां.	,,	,,	,,	च्युत-षड्ज	सा री ग म प ध नि सां
५ हिंदोल	,,	,,	साधा-रण	,,	,,	शुद्धध	कैशिक	सा री ग म प ध नि सां
६ शुद्धरामक्रिया	,,	शुद्धरी	च्युतम.	च्युत-मध्यप	,,	,,	च्युत-षड्जनि	सा री ग मं प ध नि सां
७ देशाक्षी	,,	षट् श्रुति	,,	,,	,,	पंच श्रुति	,,	सा ग ग म प ध नि सां
८ कनडगौळ	,,	,,	,,	,,	,,	,,	कैशिक	सा ग ग म प ध नि सां
९ शुद्धनाट	,,	,,	,,	,,	,,	षट् श्रुति	च्युत-षड्ज	सा ग ग म प नि नि सां
१० आहरी	,,	पंच श्रुति	साधा-रण	,,	,,	शुद्धध	,,	सा री ग म प ध नि सां
११ नादरामक्री	,,	शुद्धरी	,,	,,	,,	,,	,,	सा री ग म प ध ।नि सां
१२ शुद्धवराळी	,,	,,	शुद्ध	च्युतप	,,	,,	च्युत-षड्ज	सा री री मं प ध नि सां
१३ रीतिगौड	,,	,,	,,	शुद्ध	,,	पंच श्रुति	कैशिक	सा री री म प ध नि सां
१४ वसतभैरवी	,,	,,	च्युत-म. ग	,,	,,	शुद्ध	,,	सा री ग म प ध ।नि सां
१५ केदारगौड	,,	पंच श्रुति	,,	,,	,,	पच श्रुति	च्युत-षड्ज	सां री ग म प ध नि सां
१६ हिजुजी	,,	शुद्ध	अतर	,,	,,	शुद्ध	काकली	सा री ग म प ध नि सां
१७ सामवराळी	,,	,,	शुद्ध	,,	,,	,,	,,	सा री री म प ध ।नि सां
१८ रेवगुप्ती	,,	,,	अतर	,,	,,	,,	शुद्ध	सा री ग म प ध ध सां
१९ सामत	,,	षट् श्रुति	,,	,,	,,	षट् श्रुति	काकली	सा ग ग म प नि नि सां
२० कांमांजी	,,	पच श्रुति	,,	,,	,,	पच श्रुति	,,	सा री ग म प ध नि सां

मेलनाम	जन्य रागाः
१ मुखारी	१ मुखारी
२ मालवगौड	१ मालव गौड, २ ललिता, ३ वौळी, ४ सौराष्ट्र, ५ गुर्जरी, ६ मेचवौळी, ७ फलमंजरी, ८ गुंडक्री, ९ सिंधुरामक्री, १० छायागौळ, ११ कुरंजी, १२ कंनड बंगाल, १३ मंगल कैशिक, १४ मलहरी.
३ श्री...	१ श्रीराग, २ भैरवी, ३ गौळी, ४ धन्यासी, ५ शुद्ध भैरवी, ६ वेलावली, ७ मालवश्री, ८ शंकराभरण, ९ आंधाली, १० देवगांधार, ११ मध्यमादि.
४ सारंगनाट	१ सारंगनाट, २ सावेरी, ३ सालंग भैरवी, ४ नटनारायणी, ५ शुद्धवसंत, ६ पूर्वगौड, ७ कुंतलवराळी, ८ भिन्नषड्ज, ९ नारायणी.
५ हिंदोल	१ हिंदोल, २ मार्गहिंदोल, ३ भूपाल.
६ शुद्धरामक्री	१ शुद्धरामक्री, २ वौळी, ३ आर्द्रदेशी, ४ दीपक.
७ देशाक्षी	१ देशाक्षी.
८ कंनडगौळ	१ कंनडगौळ, २ घंटारव, ३ शुद्धबंगाल, ४ छायानट, ५ तुरुष्कतोडी, ६ नागध्वनि, ७ देवक्रिया.
९ शुद्धनाट	१ शुद्धनाट
१० अहीरी	१ अहीरी
११ नादरामक्री	१ नादरामक्री
१२ शुद्धवराळी	१ शुद्धवराळी
१३ गौळ	१ गौळ
१४ वसंत भैरवी	१ वसंत भैरवी
१५ केदारगौळ	१ केदारगौळ, २ नारायणगौळ
१६ हेजुज्जी	१ हेजुज्जी
१७ सामवराळी	१ सामवराळी
१८ रेवगुप्ती	१ रेवगुप्ती
१९ सामंत	१ सामंत
२० कांभोजी	१ कांभोजी

The author then mentions an interesting difference of opinion as to the number of रागजनक Thatas. He says:

लक्षिता विंशतिर्मेला गात्रे स्युर्निमिता अमी।
पक्षद्वयं तु वीणायां वक्ष्यते लक्ष्यसम्मतम्॥
प्राह्यादंतरकाकल्योः स्वरूपे पृथक् पृथक्।
पक्षोऽयं प्रथमस्तत्र मेलाः स्युर्विंशतिर्ध्रुवम्॥
अंतरस्य च काकल्याःस्थाने प्रतिनिधिः क्रमात्।
च्युतमध्यमगांधारश्च्युतषड्जनिषादकः॥
अयं द्वितीयः पक्षोऽत्र मेला पंचदशस्मृताः।
अत्र प्रतिनिधेः पक्षे मुखारीमेल पूर्वकाः॥
केदारगौळमेलान्ता मेलाः पंचदश स्मृताः॥
एतदेवाभिसंध्याय कथितं शार्ङ्गसूरिणा।
अल्पप्रयोगः सर्वत्र काकली चांतरस्वरः॥

Translation—Thus I have described the twenty Thatas of the Vocal musicians Now I shall state the two opinions of the **Vainikas** Those who belong to the first पक्ष (party) say that the notes अंतर & काकली should be recognized as independent Swaras & the number of Thatas should accordingly be accepted as twenty Those who belong to the second पक्ष say that the notes च्युत मध्यम गांधार & च्युत षड्जनिषाद should be recognized as good representatives or substitutes for the notes अंतर & काकली, and the number of Thatas should be fifteen only According to these last the list of Thatas given in the book should stop at केदारगौळ, which is the fifteenth Thata They go further & argue that even Sharangadeva, the author of the Sangeet Ratnakara, meant the same thing when he said that the notes अंतर & काकली should always be used sparingly.

Observation—It must in fairness be stated that Sharangadeva pandit though he does give that advice, does not expressly say that च्युत म & च्युत सा should be used as substitutes for the अंतर & काकली notes In his own Raga definitions he says nothing about the च्युत Swaras but freely uses अंतर & काकली. Rama Amatya says nothing in explanation of that in his Swaramelakalanidhi.

RAGA-VIBODHA

The author of this Sanskrit work is Pandit Somnath of the Andhra country. The date of the work as given by the author is the shaka year 1531, corresponding with 1610 A.D. It is considered to be a work of great interest in the Southern presidency. There are several features of the work however, which will make its study no less interesting to the Northern Musician. A careful perusal of the book will lead the reader to conclude that the author at some period of his life had come into contact with the music and musicians of northern India. A mere glance at the table indicating the shuddha and vikrita swaras of Somnatha, will be enough to show it. The names and descriptions of the ragas again will further support the view. In the Raga Vibodha, the reader will find some distinctly Persian Raga names, such as Husseini, Navroj, Zeeluf, Erakh, and so forth, referred to.

The important points in connection with this work for consideration will be :—

(1) How many out of the 22 srutis did Somnath use as swaras in his ragas.

(2) How did he place his shuddha and vikrita swaras on the srutis.

(3) How many thatas did he use for the classification of his ragas.

(4) What was his classification of the janya ragas.

(5) Will any of his raga definitions be useful for the Northern musician.

I may state at the very outset that Somnath like all his predecessors whether southern or northern recognised the wellknown twenty two srutis, which again were the same as those of the older writers. The orthodox rule for the location of swaras on the srutis, was also accepted by him. He says :—

षड्जर्षभगांधारा मध्यमपंचमकधैवत निषादाः ।
इत्यभिधास्त्वमीषां स रि ग म प ध नी ति संज्ञाऽन्याः ॥
तेषांश्रुतयः क्रमतो वेदा रामा दशौ तथांबुधयः ।
निगमा दहनाः पक्षा एवं द्वाविंशतिः सर्वाः ॥

These verses speak for themselves, and we need not discuss them any further. The placing of the shuddha swaras is described thus :

तुर्यायां सप्तम्यां तासु नवम्यां श्रुतौ त्रयोदश्याम् ।
सप्तदशी विंशीद्वाविंशीषु च ते स्फुटाः क्रमतः ॥

Evidently, 4, 7, 9, 13, 17, 20, 22, were also the "adhara-srutis" of the shuddha swaras of Somnath. The method adopted by Somnath for placing the twenty two srutis on the key board of the vina, differed from that of Sharangdeva pandit. The latter put twenty-two separate wires each representing a sruti, on his vina Somnath put twenty two frets under the wires of his vina and made them produce the intended twenty two srutis The principle of determining the sruti was the same in both cases. The whole length of the wire produced the fundamental note 'mandra-shadja', and the frets below the wire produced the remaining srutis when the wire was pressed against them

मन्द्रतमध्वनिराद्या त्रयं क्रमोच्चस्वनं किंचित् ।
न्यस्याः सूक्ष्माः सार्योऽथ द्वाविंशतिरुपसमतन्त्र्याः ॥
तंत्री यथैषमुच्चोच्चतरत्वा किमपि तासु स्यात् ।
मतर्नैषोऽन्यतरः श्रुतयः इति रवा इहोत्पतन्त्यां सः ॥
कथमस्तृतीयसार्यम् इ. इ. इ.

" मनागुच्चध्वनिः, " " मध्ये विसदृश ध्वन्यतर न स्यात्तथा. "

These points of Bharata and Sharangdeva were strictly followed by Somnath also We cannot say for certain whether or not he understood their real significance. Perhaps he did not. The verses may be translated thus :—The first wire should be tuned to the lowest possible pitch, and it will be the first sruti The next three should be so tuned that each will be a little higher than the next preceding one. (Thus there would be four wires on the key board) Next place twenty two small frets under the fourth wire in such a way that each will produce a sound a little higher than that of the preceding one, care being taken to see that between any two consecutive sruti sounds, no dissimilar "dhwani", or sound is permitted to appear. (The author means to say that the ratio between any two consecutive sruti sounds should be the same all through) The fourth wire will produce the sound of shadja Among the frets, the third will produce rishabha, the fifth will produce gandhara and so forth Compare the statement of Sharangdeva :—

आद्या मंद्रतमध्वाना द्वितीयोच्चध्वनिर्मनाक् ।
स्यात्तथैवं स्याच्छ्रुतयोर्मध्येऽध्वन्यन्तरश्रुतेः ॥

The reader can easily see from this that these ancient writers considered their srutis to be based upon a standard sruti ratio In other words, they understood the srutis, to rise in pitch in geometrical progression

Pandit Somnath then proceeds to locate his vikrita swaras thus:

इति सप्तोक्ताः शुद्धा विकृतान् सप्तैव वच्मि सहनाम्ना ।
साधारणोंतरश्च श्रुति श्रुती चेत्य गो मस्य ॥

Translation.—Having described the seven shuddha swaras in this way, I shall now mention the seven vikrita swaras in this way by their names. When shuddha gandhara takes the first sruti of 'ma' it becomes sadharana 'ga', and when it takes the second sruti of 'ma', it becomes antara 'ga'.

निःकैशिकी च काकल्यथ सस्यैको भजंश्च तां ते द्वे ।
निगमा मृदुपर समपाः समपतृतीयश्रुतिस्थित्या ॥

Translation.—When nishada takes the first sruti of shadja it becomes kaishika 'ni', and when it stands on the second sruti of shadja, it becomes kakali 'ni'. When the swaras 'ni', 'ga' and 'ma' rise to the third sruti of the next 'sa', 'ma', and 'pa', they become "mrdu sa", "mrud ma" and "mrdu pa" respectively.

Observation.—The term "mrdu", it will be seen, corresponds with the term "chyuta" of Sharangdeva and Rama Amatya. Pundarika Vittala used the word "laghu" instead.

Somnath then discusses the twelve vikritas of Sharangdeva and tries to proves that in spite of the use of twelve separate swara names for the vikrita, Sharangdeva really used only seven vikrita swaras, which were the same as those he himself used. There were some more vikrita names in use in his time, and the author referring to them says:

रिधयोः परश्रुतिगतेश्चतस्र इह पंच षट् तथाश्रुतयः ।
देशीरागेषु अभिवीक्ष्यंते च षट् तथा गमयोः ॥

Translation.—In the modern or deshi music we sometimes come across 'ri' and 'dha' swaras with four five or six srutis. And these are known as चतुःश्रुतिक, पंचश्रुतिक, षट्श्रुतिक ऋषभ & धैवत.

These notes are the result of 'ri' and 'dha' rising through the srutis of the next following notes गांधार & निषाद.

Observation.—चतुःश्रुतिक रि, पंचश्रुतिक रि & षट्श्रुतिक रि would naturally enter the intervals of gandhara and maddhyama. The reader will here ask "Are these new vikritas added to the seven already referred to by the author,?" The answer is

इति तेषु संभवंति त्रयोऽन्या एभ्यो विलक्षणा विकृताः ।
पंचश्रुतिःशुद्धगांधारात् साधारणतश्च षट्श्रुतिकः ॥
रिर्न पृथक् तादृग्धो नेः कैशिकिनश्च षट्श्रुतिगों मात् ।
किंतूक्त रिगधमानां व्यवहृतये पृथगिताः संज्ञाः ॥

Translation —No doubt three more vikrita swaras will result from this arrangement, but it will be observed that pancha sruti 'ri' and shatsruti-ri are in no way different to shuddha 'ga' and sadharana 'ga' already noticed The same observation will be made in the case of पंचश्रुतिक ध & षट्श्रुतिक ध which are no other than the sounds of shuddha 'ni' and kaishika 'ni' Although this is so, it is convenient to retain these new swara names in practice Somnath then compares these last named *vikritas with those of the other music schools which* use the vikrita terminations 'tivra', tivratara', and tivratama' He says

तीव्रश्चतुःश्रुतित्वे पंचश्रुतिकत्व एव तीव्रतरः ।
षट्श्रुतिकत्वे तीव्रतम इति परं ता यथायोग्यम् ॥

Translation—Tivra 'ri' is चतुःश्रुतिक रि, tivratara 'ri' is पंचश्रुति रि and tivratama 'ri' is the same as षट्श्रुतिक रि The same reasoning applies to the case of dhaivata; but the author adds परं ता यथायोग्यम् that is, these vikritas cannot be used indiscriminately.

Observation—The commentary on these lines is rather interesting; परं ता यथायोग्यम् । गस्य मस्य च षट्श्रुतित्वे तीव्रतम इति एकैव संज्ञा, i e there will be no चतुःश्रुति ग & पंचश्रुति ग or म चतुःश्रुति ग is the same as अंतर ग & पंचश्रुति ग *is* मृदु म.

These are independent names These notes take no other संज्ञा or names in practice. Then again चतुःश्रुति म is the shuddha 'ma' itself and पंचश्रुति म is never heard of in practice. षट्श्रुति म is no doubt allowed but it will be called tivratara ma and not tivratama 'ma, which name would have been more proper. The reader may *compare this reasoning with that of Lochana and Ahobala with* advantage. The author defends these new संज्ञा by citing a text from Ratnakara:—न च पूर्वोक्त निगमानां समपतृतीयश्रुतिरपत्व (?) रिधगमानां चतुःश्रुतित्वंच पुरातनानुक्तत्वात् शास्त्रात् विरुद्धम्. According to Sharangdeva himself,— यद्यल्लक्ष्यप्रधानानि शास्त्राण्येतानि। अर्थात् शास्त्राणामन्यथात्वमपि लक्ष्यस्थापनाय योज्यम्. Somnath means to say that although the ancient authorities did not allow 'ni' 'ga' and 'ma' to rise upto the third srutis of their respective succeeding notes, the actual fact was that these vikritas were found in practice That being so, their use must be justified by the उपलक्षणन्याय process That is by saying that the old "mrdu" places had only taken new names.

The author then further supports his argument by showing what other writers under similar situations did

षट्श्रुतिकं म पंचश्रुतिकौ च चतुः श्रुतीं रिधावप्यदर् ।
रागविवेकाख्यगायन्याख्याने कल्लिनाथसूरिरपि ॥

Pandit Somnath then proceeds to locate his vikrita swaras thus:

इति सप्तोक्ताः शुद्धा विकृतान् सप्तैव वच्मि सहनाम्ना ।
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पंचश्रुतिःशुचेर्गांधारात् साधारणतश्च षट्श्रुतिकः ॥
रिर्न पृथक् तादृग्धो नेः कैशिकिनश्च षट्श्रुतिर्गो मात् ।
किंतूक्त रिगधमानां व्यवहृतये पृथगेताः संज्ञाः ॥

Translation—No doubt three more vikrita swaras will result from this arrangement, but it will be observed that pancha sruti 'ri' and shat-sruti-ri are in no way different to shuddha 'ga' and sadharana 'ga' already noticed. The same observation will be made in the case of पचश्रुतिक ध & षट्श्रुतिक ध which are no other than the sounds of shuddha 'ni' and kaishika 'ni'. Although this is so, it is convenient to retain these new swara names in practice. Somnath then compares these last named vikritas with those of the other music schools which use the vikrita terminations 'tivra', tivratara', and tivratama'. He says

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Translation—Tivra 'ri' is चतुःश्रुतिक रि, tivratara 'ri' is पचश्रुति रि and tivratama 'ri' is the same as षट्श्रुतिक रि. The same reasoning applies to the case of dhaivata; but the author adds परं ता यथायोग्यम् that is, these vikritas cannot be used indiscriminately.

Observation—The commentary on these lines is rather interesting: परं ता यथायोग्यम् । गस्य मस्य च षट्श्रुतित्वे तीव्रतम इति एकैव सज्ञा; i.e. there will be no चतुःश्रुति ग & पंचश्रुति ग or म चतुःश्रुति ग is the same as अंतर ग & पंचश्रुति ग is मृदु म.

These are independent names. These notes take no other संज्ञा or names in practice. Then again चतुःश्रुति म is the shuddha 'ma' itself and पचश्रुति म is never heard of in practice. षट्श्रुति म is no doubt allowed but it will be called tivratara ma and not tivratama 'ma, which name would have been more proper. The reader may compare this reasoning with that of Lochana and Ahobala with advantage. The author defends these new सज्ञा by citing a text from Ratnakara:—न च पूर्वोक्त निगमानां समपतृतीयश्रुतिस्थत्व रिधगमानां चतुःश्रुतिमस्त्वंच पुरातनानुक्तत्वात् शास्त्रांतर विरुद्धम्. According to Sharangdeva himself;—यद्वाल्लक्ष्यप्रधानानि शास्त्राण्येतानि। अर्थात् शास्त्राणामन्यथात्वमपि लक्ष्यस्थापनाय प्रोक्तम्. Somnath means to say that although the ancient authorities did not allow 'ni' 'ga' and 'ma' to rise upto the third srutis of their respective succeeding notes, the actual fact was that these vikritas were found in practice. That being so, their use must be justified by the उपलक्षणन्याय process. That is by saying that the old "mrdu" places had only taken new names.

The author then further supports his argument by showing what other writers under similar situations did.

षट्श्रुतिकं म पंचश्रुतिकौ च चतुः श्रुती रिधावगदत् ।
रागविवेकाध्यायव्याख्याने कल्लिनाथसूरिरपि ॥

Translation.—The vikritas षट्श्रुतिग, चतुःश्रुतिरि, पंचश्रुतिरि, चतुःश्रुतिध, पंचश्रुतिध have also been mentioned by Pandit Kallinath in his commentary on the Ratnakara.

Observation.—The whole point of the discussion is this:—Music is a progressive science and art. It progresses with the taste and needs of the community. In deshi music, we cannot always pretend to stick to the old orthodox theories and rules. New technical expressions and new rules are bound to come in course of time, and we must be prepared to make room for them. The author points out that even Hanuman was of the same opinion:—

ग्रामश्रुतिस्वरादेरनियम उक्तो हनुमता येन ।
देशी रागे भेदाः श्रुतिस्वरोरगादि पदेन ।
ग्रामौ षड्जमध्यमौ ।
श्रुतयः षड्जादिषु नियताश्चतुरादयः ।
स्वरा शुद्धविकृतलक्षणाः ।
आदि शब्देन षाडवौडुवसंपूर्णत्वानि ग्रहांशादि जातयः ।

In all these matters, changes are bound to happen and we shall have to treat them with respect.

Having discussed the first two questions out of the five raised by us, we shall now proceed to give definite answers to them. Pandit Somnath uses fifteen vikrita swara-names, in all and these are:

१ तीव्र री	६ मृदु म	११ तीव्रतर ध
२ तीव्रतर री	७ तीव्रतम ग	१२ तीव्रतम ध
३ तीव्रतम री	८ तीव्रतम म	१३ कैशिक नि
४ साधारण ग	९ मृदु प	१४ काकली नि
५ अंतर ग	१० तीव्र ध	१५ मृदु सा

Five of these will have to be rejected because they coincide with three vikrita and two shuddha swaras already counted. In other words they overlap these latter. Thus:—तीव्रतर रि, तीव्रतम रि, तीव्रतम ग, तीव्रतर ध, तीव्रतम ध are identical with शुद्ध ग, साधारण ग, शुद्ध म, शुद्ध नि, कैशिक नि respectively. Real vikritas according to the Pandit are those notes which have independent sounds. The remaining ten being unobjectionable, it may be said that the system of Raga Vibodha is based on seventeen swaras, (seven shuddhas and ten vikritas) only. The following chart will clearly show how Somnath placed his swaras on the srutis.

	शुद्धस्वरा	विकृतस्वराः	False Vikrits	Hindustani Swaras
१ तीव्रा	...	कैशिक नि	तीव्रतम ध	कोमल नि ११
२ कुमुद्वती	...	काकली नि	...	तीव्र नि १२
३ मंदा	...	मृदु सा	...	... (तीव्रतम नि)
४ छदोवती	सा	...	...	सा (१)
५ दयावती	...	...	...	... ...
६ रंजनी	...	...	...	... ...
७ रतिका	री	...	...	कोमल री (२)
८ रौद्री	...	तीव्र रि or चतुःश्रुति	...	... ...
९ क्रोधी	ग	.	तीव्रतर री	तीव्र री (३)
१० वज्रिका	...	साधारण ग	तीव्रतम री	कोमल ग ४)
११ प्रसारिणी	...	अंतर ग	...	तीव्र ग (५)
१२ प्रीति	...	मृदु म	..	... (तीव्रतम ग)
१३ मार्जनी	म	...	तीव्रतम ग	म (६)
१४ क्षिति	...	...	...	..
१५ रक्ता	...	तीव्रतम म	...	तीव्र म (७)
१६ संदीपिनी	...	मृदु प	...	... (तीव्रतम म)
१७ आलापिनी	प	...	...	प (८)
१८ मदंती	...	...	...	... ...
१९ रोहिणी	...	...	...	... ...
२० रम्या	ध	...	...	कोमल ध (९)
२१ उग्रा	...	तीव्र ध=चतुःश्रुति	...	... ...
२२ क्षोभिणी	नि	...	तीव्रतर ध	तीव्र ध (१०)
	७	१०		

मेल नाम	सा	री	ग	म	प	ध	नि	Hindustani Equivalents
१ मुखारी	शुद्ध	शुद्ध	शुद्ध	शुद्ध	शुद्ध	शुद्ध	शुद्ध	सा री री म प ध ध सां
२ रेव गुप्ति	,,	,,	अंतर	,,	,,	,,	,,	सा री ग म प ध ध सां
३ सामवराळी	,,	,,	शुद्ध	,,	,,	,,	काकली	सा री री म प ध नि सां
४ तोडी	,,	,,	साधा-रण	,,	,,	,,	कैशिक	सा री ग म प ध नि सां
५ नादरामक्री	,,	,,	,,	,,	,,	,,	मृदुसा	सा री ग म प ध नि सां

मेल नाम	सा	री	ग	म	प	ध	नि	Hindustani Equivalents
६ भैरव	,,	,,	अंतर	,,	,,	,,	कैशिक	सा री ग म प ध नि सां
७ वसंत	,,	,,	,,	,,	,,	,,	काकली	सा री ग म प ध नि सां
८ वसंत भैरवी	,,	,,	मृदुम	,,	,,	,,	कैशिक	सा री ग म प ध नि सां
९ मालवगौड	,,	,,	,,	,,	,,	,,	मृदुसा	सा री ग म प ध नि सां
१० रीतिगौड	,,	,,	शुद्ध	,,	,,	तीव्रतर	कैशिक	सा री री म प ध नि सां
११ आभीरनाट	,,	तीव्रतर	साधारण	,,	,,	शुद्ध	मृदुसा	सा री ग म प ध नि सां
१२ हमीर	,,	,,	मृदुम	,,	,,	,,	,,	सा री ग म प ध नि सां
१३ शुद्धरामक्री	,,	शुद्ध	,,	तीव्रतम	,,	,,	,,	सा री ग मं प ध नि सां
१४ शुद्धवराटी	,,	,,	साधारण	,,	,,	,,	,,	सा री ग मं प ध नि सां
१५ श्री	,,	तीव्र	,,	,,	,,	तीव्र	कैशिक	सा री ग मं प ध नि सां
१६ कल्याण	,,	तीव्रतर	,,	मृदुप	,,	शुद्ध	मृदुसा	सा री ग मं प ध नि सां
१७ कांबोदी	,,	,,	अंतर	शुद्ध	,,	तीव्रतर	काकली	सा री ग म प ध नि सां
१८ मल्लारी	,,	,,	मृदुम	,,	,,	,,	मृदुसा	सा री ग म प ध नि सां
१९ सामंत	,,	तीव्रतम	अंतर	,,	,,	तीव्रतम	काकली	सा ग ग म प नि नि सां
२० कर्णाटगौड	,,	,,	मृदुम	,,	,,	तीव्र	कैशिक	सा ग ग म प ध नि सां
२१ देशाक्षी	,,	,,	,,	,,	,,	तीव्रतर	मृदुसा	सा ग ग म प ध नि सां
२२ शुद्धनाट	,,	,,	,,	,,	,,	तीव्रतम	,,	सा ग ग म प नि नि सां
२३ सारंग	,,	तीव्रतर	तीव्रतम	मृदुप	,,	,,	मृदुसा	सा री म मं प नि नि सां

Explanatory Note

शुद्ध रि, ध = कोमल रि, कोमल ध

शुद्ध ग, नि = तीव्र रि, तीव्र ध

तीव्रतर री, तीव्रतर ध } तीव्र री, तीव्र ध

तीव्रतम रि, ध = कोमल ग, कोमल नि
मृदु म, मृ. प, मृ. सा = accepted as तीव्र ग, तीव्र म, तीव्र नि
कैशिक नि = कोमल नि
काकली नि = तीव्र नि
साधारण ग = कोमल ग
अंतर ग = तीव्र ग
For details refer to the chart of swaras.

मेल नाम	जन्य राग नाम
१ मुखारी	१ मुखारी.
२ रेवगुप्ति	१ रेवगुप्ति.
३ सामवराळी	१ सामवराळी, २ वसंतवराळी.
४ तोडी	१ तोडी.
५ नादरामक्री	१ नादरामक्री.
६ भैरव	१ भैरव, २ पौरवी.
७ वसंत	१ वसंत, २ टक्क, ३ हिजेज. ४ हिंदोल.
८ वसंत भैरवी	१ वसंत भैरवी, २ मारवा
९ मालवगौड	१ मालवगौड, २ चेतीगौडी, ३ पूर्वी, ४ पाडी, ५ देवगांधार, ६ गौडक्रिया, ७ कुरंजी, ८ बहुली, ९ रामक्री, १० पावक, ११ आसावरी, १२ पंचम, १३ बंगाल, १४ शुद्धललित, १५ गुर्जरी, १६ परज, १७ शुद्धगौड.
१० रीतिगौड	१ रीतिगौड.
११ आभीर	१ आभीर.
१२ हंमीर	१ हमीर, २ बिहगड, ३ केदार.
१३ शुद्धवराटी	१ शुद्धवराटी.
१४ शुद्धरामक्री	१ देशकार, २ ललित, ३ जेतश्री, ४ त्रिवेणी, ५ देशी.
१५ श्रीराग	१ श्री, २ मालश्री, ३ धनाश्री, ४ भैरवी, ५ धवला, ६ सैंधवी.
१६ कल्याण	१ कल्याण.
१७ काबोदी	१ कांबोदी, २ देवक्री.
१८ मल्हारी	१ मल्हारी, २ नटमल्हार, ३ पूर्वगौड, ४ भूपाळी, ५ गौड, ६ शंकराभरण, ७ नटनारायण, ८ नारायणी, ९ केदार, १० सालकनाट, ११ बेलावली, १२ मध्यमादि, १३ सानेरी, १४ सौराष्ट्री.
१९ सामंत	१ सामंत.
२० कर्णाट	१ कर्णाट, २ अडाणा, ३ नागध्वनि, ४ शुद्धबंगाल, ५ वर्णनाट, ६ तुरुष्कतोडी or ईरान.
२१ देशाक्षी	१ देशाक्षी.
२२ शुद्धनाट	१ शुद्धनाट.
२३ सारंग	१ सारंग.

It is not necessary to discuss the definitions of these derivative Ragas here. Many of these Ragas will be found to have retained the major portions of their old forms to this day and thus the Raga Vibodha will be of great importance, from the historical point of view, to the Northern musician. Many of Somnath's Ragas are known to the Northern musician. The fifth question therefore may be safely answered in the affirmative.

CHATUR DANDI PRAKASIKA

We shall now take up for discussion the Chaturdandi Prakasika written by Pandit Vyankata Makhi. The work was written about the shaka year 1560, that is to say about thirty years after Somnath's Raga Vibodha. Vyankata Makhi is admittedly a Southern writer. Chatur dandi prakasika is still respected as a great authority in the southern presidency. Pandit Subrama Dixit of Etayyapuram, who died only five or six years ago was the last exponent of the Chaturdandi system. Vyankata Makhi claims to have finally decided the twelve note-system in the South. It is also his claim that he was the first to lay down the seventy-two mela-kartas or melody-types for Raga classification. You are aware that in the Swara Mela Kalanidhi and in the Raga Vibodha, the vikrita swaras recognised were more than five. It is true that Rama Amatya knew of the school which was ready to accept "mrdu" or "chyuta" ma and "mrdu" or "chyuta" sa as representing the antara ga and kakali ni, but the "mrdu" notes were not definitely discarded.

Vyankata Makhi definitely does it as follows :—

चतुश्चतुश्चतुश्चैव षड्जमध्यमपंचमाः ।
द्वे द्वे निषादगांधारौ त्रिस्त्री रिषभधैवतौ ॥

This is the usual rule which we have discussed more than once.

विकृतास्तु स्वराः पंचेत्यस्माभिरवधार्यते ।
रत्नाकरे तु निःशंको विकृतान् द्वादशस्वरान् ॥

अब्रवीत् केचन पुनः सप्ताहुर्विकृतस्वरान् ।
सर्वमेतत्समालोच्य लक्ष्यमार्गानुसारतः ॥
स्वराः पंचैव विकृता इति सिद्धांतितं मया ।
तांश्च पंच स्वरान् सम्यग् विविच्य व्याहरामहे ॥
साधारणश्च गांधारो गांधारश्चांतराभिधः ।
द्वौ तौ च मध्यमश्रुतिसंभूतौ विकृतौ स्वरौ ॥
वराळीमध्यमश्चैकः पंचमश्रुतिसंभवः ।
षड्जश्रुतिसमुद्भूतौ कैशिकीकाकलीस्वरौ ॥
एवमेते स्वराः पंच विकृता इति निर्णयः ।
आहत्य शुद्धविकृताः स्वरा द्वादश कीर्तिताः ॥

The five vikrita swaras acknowledged by Vyankat Makhi therefore, are
(१) साधारण गांधार (२) अंतर गांधार (३) वराळी म (४) कैशिक नि (५) काकली नि
Of these five notes, वराळी म is a new name and requires explanation The Pandit says :—

चतस्रः श्रुतयः प्रोक्ताः पंचमे गीतवेदिभिः ।
आद्यामाद्यां द्वितीयां च तृतीयामपि तच्छ्रुतिम् ।
वराळीमध्यमः प्रोक्तः श्रुतित्रयसमन्वितः ॥

This shows that the वराळी म of Vyankata Makhi was the मृदु प of Somnatha. It stood on the third sruti of the panchama The tivratama 'ma' of the Raga Vibodha was one sruti lower There were some other swara names in general use at Vyankat Makhi's time, and these may also be noted.

तथाहि शुद्धऋषभशुद्धधैवतयोः पुनः ।
त्रिश्रुत्येकमात्रेण सर्वदाप्येकरूपता ॥

Translation —Shuddha 'ri' and shuddha 'dha' are never allowed to change the character of three sruti notes, and hence never assume other names. They always remain shuddha 'ri' and shuddha 'dha'.

यदा तु शुद्धगांधारो गांधारत्वं प्रपद्यते ।
तदा द्विश्रुतिको ज्ञेयो मुखारीरागके यथा ॥

Translation —When the shuddha gandhara retains its name "gandhara" unchanged it is always a "dwi-shrutic" or shuddha gandhara, as in the case of the Mukhari ragam

यदा स एव जायेत ऋषभस्तु तदा पुनः ।
पंचश्रुतिरिति ज्ञेयः श्रीरागोऽत्र निदर्शनम् ॥

Translation.—When the gandhara is described in terms of the 'ri' as in Sri Raga, its two srutis are added to those of the preceding rishabha, with the result that the gandhara is then called पंचश्रुतिऋषभ (3 plus 2 srutis rishabha).

एवं शुद्धनिषादस्य निषादत्वं यदा भवेत् ।
तदाहिद्विश्रुतित्वं स्यात् मुखार्यत्र निदर्शनम् ॥
स एव यदि जायेत धैवतस्तु तदा पुनः ।
पंचश्रुतिरिति ज्ञेयः शंकराभरणे यथा ॥

The same reasoning applies to the shuddha nishada, when it remains shuddha nishada, it is of two srutis, and when it becomes a dhaivata, it is पंचश्रुति धैवत as in the Shankarabharana raga.

Observation.—This change of names is made to avoid the necessity of having two notes of the same denomination in the same mela or raga.

तथैव शुद्धगांधारनिषादौ द्वौ द्विरूपिणौ ।
साधारणाख्यगांधारः शुद्धर्षभयुतो यदि ॥
तदा त्रिश्रुतिकोऽज्ञेयो भूपालोऽत्र निदर्शनम् ।
तस्यैव पंचश्रुतिना ऋषभेणान्वयो यदि ॥
तदैक श्रुतिता ज्ञेया श्रीरागोऽत्र निदर्शनम् ।
यदा ऋषभसंज्ञोऽयं तदा षट्श्रुतिको भवेत् ॥

Translation.—Then again the two notes shuddha 'ga' and shuddha 'ni' have some other characters assigned to them according to their distance or position in relation to the preceding notes. Thus take the case of the sadharana gandhara. This is the normal three sruti gandhara above shuddha rishabha. It is used in the Bhupala raga. If this sadharana gandhara is taken in connection with or used after a पंचश्रुति रि (the preceding note) then it is only an एकश्रुति ग as in the Shri Raga. But if this sadharana 'ga' is described in terms of rishabha, then the three srutis of 'ri' will be added to the three srutis of 'ga', and the resulting note will be called the षट्श्रुति ऋषभ.

Observation.—This process is very clear and needs no further explanation. It is also applicable to shuddha ni and kaishika ni. These

last mentioned notes will optionally become पंचश्रुति ध and षट्श्रुति ध respectively.

Before proceeding to the "mela" chapter of the Chaturdandi Prakasika, I would like to draw your attention to the Pandit's description of the vadi samvadi swaras He says :—

चतुर्विध स्वरेष्वेषु वादी राजा प्रकीर्त्यते ।
संवादीत्वनुसारित्वादस्यामात्यो निर्धार्यते ॥
विवादी विपरीतत्वाद् धीरैरुक्तो रिपूपमः ।
स्वरूपमर्दनं तेन प्रयोगेस्याद्विवादिना ॥
स्वरूपमर्दनाभावे गीते रक्तिर्नलभ्यते ।
शत्रूपमर्दने ह्रियाद्राज्ञा लोके प्रकाशनम् ॥
नृपामात्यानुसारित्वादनुवादी तु भृत्यवत् ॥

Observation.—The pandit obviously advises the use of the proper vivadis in their proper places He says that this use will enhance the attractiveness of the raga. In their absence गीतेरक्तिर्नलभ्यते. This is something like the Western "dissonances" theory.

I do not think I ought to take you through the laborious process of the construction of the seventy two thatas of Vyankata Makhi. The process is well known in the Southern presidency. I have fully explained it in my own works, the Laksya Sangeeta and the Hindusthani Sangeeta Paddhati It may be noted that Vyankata Makhi does not use all the seventy two melas in classifying his janya ragas. He uses only nineteen of them. These are :—

आदिमः सर्वमेलानां मुखारीमेल उच्यते ।
मेलः सामवराल्याख्यरागस्यातः परं मतः ॥
ततो भूपालमेलोऽथ हेज्जुज्जीमेल ईरितः ।
वसंतभैरवीमेलो गौळमेलस्ततः परम् ॥
भैरवीमेल आहीर्या मेलः श्रीरागमेलकः ।
काम्भोजी मेलकोऽथ स्यात् शङ्कराभरणस्य च ॥
सामन्तमेलो देशाक्षीमेलो नाटस्यमेलकः ।
मेलः शुद्धवराल्याख्यरागस्यातः परं मतः ॥
मेलः पंतुवराल्याश्च शुद्धरामक्रियायुतः ।
मेलः सिंहरवाख्यस्यात्भूपरागस्यमेलकः ॥
कल्याणीरागमेलश्चेत्याहृत्यैकोनविंशतिः ॥

अथ मेलस्वराः ।

१ मुखारी	सा	री शुद्ध	ग शुद्ध	म शुद्ध	प शुद्ध	ध शुद्ध	नि शुद्ध
२. सामवराळी	सा	,,	साधारण	,,	,,	,,	काकली
३ भूपाल	सा	,,	,,	,,	,,	,,	कैशिक
४ हेजुज्जी	सा	,,	अंतर	,,	,,	,,	शुद्ध
५ वसंतभैरवी	सा	,,	,,	,,	,,	,,	कैशिक
६ गौळ	सा	,,	,,	,,	,,	,,	काकली
७ भैरवी	सा	पंचश्रुति	साधारण	,,	,,	,,	कैशिक
८ आहीरी	सा	,,	,,	,,	,,	,,	कैशिक
९ श्री	सा	,,	,,	,,	,,	पंचश्रुति	कैशिक
१० काम्भोजी	सा	,,	अंतर	,,	,,	,,	कैशिक
११ शंकराभरण	सा	,,	,,	,,	,,	,,	काकली
१२ सामंत	सा	,,	,,	,,	,,	षट्श्रुति	,,
१३ देशाशी	सा	षट्श्रुति	,,	,,	,,	पंचश्रुति	,,
१४ नाट	सा	,,	,,	,,	,,	षट्श्रुति	,,
१५ शुद्धवराळी	सा	शुद्ध	शुद्ध ग	वराळी	,,	शुद्ध	,,
१६ पंतुवराळी	सा	,,	साधारण	,,	,,	,,	,,
१७ शुद्धरामक्री	सा	,,	अंतर	,,	,,	,,	,,
१८ सिंहरव	सा	पंचश्रुति	साधारण	,,	,,	पंचश्रुति	कैशिक
१९ कल्याणी	सा	,,	अंतर	,,	,,	,,	काकली

These are really interesting thatas. Nearly all the ten thatas of the Hindusthani Paddhati are to be found among them. सिंहरव मेल is a new introduction by Vyankata Makhi Pandit. He says :—

मेलः सिंहरवे रागे वेंकटाध्वरिकल्पिते

This is a new Raga introduced by the Pandit In the Hindusthani Sangeeta, tivra 'ma' does not come in suitably in a raga which takes the 'ga' and 'ni' komala The Pandit had to invent one for the mela

Here there is an interesting problem before the scholars If Vyankata Makhi has invented the Sinharava Raga, and put it under the 58th mela, how is it that the raga appears in the Sangeet Parijat of Ahobala Pandit? Ahobala puts it under his Bhairavi thata, that is our modern Asavari Thata. Was Parijat written after the Chaturdandi? It is quite true this raga does not appear in any of the other works of the southern system. There was a very old raga called "Ghantarava" in existence Even the Ratnakara mentions the "Ghantarava" It is quite possible that Ahobala took it from the Chaturdandi, and changed its thata in deference to the northern rule of avoiding tivra 'ma' in combination with the komala 'ga' and komala 'ni' Again, Chaturdandi has ननुनारितस्वरश्रुत्योर्भेदो नादिकरूपयोः। अतिमेदलयोर्गदनुस्वर्णटकवि(टयोः। and Parijata has धुनय.स्पु.स्वराभिधाः आवरणत्वेन हेतुना। अहिकुंडलवत्तत्रभेदोक्तिः शास्त्रसम्मता.
The idea is the same Has Ahobala taken his idea from the Chaturdandi Prakasika? Ahobala made it a northern "Sinharava", we shall say by the कामचारप्रवर्तित्वन्याय. It is also possible that Ahobala saw Somnath's Raga Vibodha That would explain his calling tivratara 'ma', tivratama 'ma', also. But we need not go into a prolonged discussion of those points because that will be an unjustifiable digression.

Vyankata Makhi classified his ragas under his nineteen thatas as follows:—

जनक मेलनाम	जन्य रागाः
१ मुखारी	१ मुखारी
२ सामवराळी	२ सामवराळी
३ भूपाल	१ भूपाळ, २ भिन्नषड्ज
४ वसंत भैरवी	१ वसंत भैरवी
५ गौळ	१ गौळ, २ गुंडक्रिया, ३ सालगनाट, ४ आद्यामक्रिया, ५ ललिता, ६ पाडी, ७ गुर्जरी, ८ बहुली, ९ मलहरी, १० सावेरी, ११ नारायणदेश, १२ पूर्वगौळ, १३ कर्णाटबंगाल, १४ सौराष्ट्र.
६ आहरी	१ आहरी
७ भैरवी	१ भैरवी

जनक मेलनाम	जन्य रागः
८ श्रीराग	१ श्री, २ सालंगभैरवी, ३ धन्यासी, ४ मालवश्री, ५ देवगांधार, ६ आंधाली, ७ बेलावली, ८ कर्नडगौळ.
९ देजुळी	१ देजुळी, २ रेवगुप्ति
१० कांमोर्जी	१ कांमोर्जा, २ केदारगौळ, ३ नारायणगौड.
११ शंकराभरण	१ शंकराभरण, २ आरभी, ३ नागध्वनि, ४ साम, ५ शुद्धवसंत, ६ नारायण-देशाक्षी, ७ नारायणी.
१२ सामंत	१ सामंत
१३ देशाक्षी	१ देशाक्षी
१४ नाट	१ नाट
१५ शुद्धवराळी	१ शुद्धवराळी
१६ पंतुवराळी	१ पंतुवराळी
१७ शुद्धरामक्रिया	१ शुद्धरामक्रिया
१८ सिंहरव	१ सिंहरव
१९ कल्याणी	१ कल्याण

We shall not go into the special characteristics of these janya ragas because that is beyond the province of this paper.

SANGEETA SARAMRITA

This work was written by the Maharaja Tulajirao Bhonsle of Tanjore. You all know that Tanjore was formerly ruled by a Mahratta belonging to the family of the Maharaja Shivaji. The date, therefore, of the Sangeeta Saramrita will not be difficult to determine. It is said to be 1783 A.D. or thereabouts. Sangeeta Saramrita deals with the southern system of music, and its shuddha scale, is therefore,

the Mukhari scale, or the present Kanakangi. I have already stated the Hindusthani notes corresponding to the shuddha notes of the Karnatik system. In the Swaradhyaya, Tulajirao brings in many of the details described by Pandit Sharangdeva in his Sangeeta Ratnakara, without adding, which is unfortunate, any reason or explanation for the procedure. The sruti, swara, grama, murchhana, tana, alamkara, jati, chapters are all brought in more or less in the language of Sharangdeva. After that the author abruptly begins as follows:—

प्रत्येकमथ रागाणां मेलमादौ निरूप्यते ।
रागाः सम्यक् निरूप्यते उदाहरणपूर्वकम् ॥
मेलज्ञानं विना मेलजन्यं ज्ञातुं न शक्यते ।
तस्मान्मेल प्रबोधार्थं तत्स्वरूपं प्रदर्श्यते ॥

After that comes in the मेलनप्रक्रिया

षड्ज आद्यस्तदुपरि चत्वारः क्रमशः स्वराः ।
ऋषभास्थानकाश्चापि गांधारास्थानकाश्च ते ॥
आद्यस्तत्र न गांधारश्चतुर्थः ऋषभो न हि ।
ऋषभावपि गांधारौ द्वितीयकतृतीयकौ ॥
प्रथमादित्रय यत्र भवेदृषभसंज्ञकम् ।
द्वितीयादि त्रय चात्र भवेद्गांधारसंज्ञितम् ॥

It will be easily seen that the author here follows the [illegible] by Pandit Vyankata Makhi for obtaining his [illegible] the 12 swaras of the scale. Tulajirao has also [illegible] scale. That the author knew about the Chaturdandi [illegible] the following reference by him to that work:—

चतुर्दंडिप्रकाशिकाकारस्तु एवं लक्षणलक्ष्यानुरोधेन [illegible] मध्यमग्रामविभाजकपंचमस्य स्वोपात्तस्यैव षड्जग्रामे [illegible] पंचममध्यमः" इतिव्यवहर्तुमुचितम् । [illegible] योगादर्शनात् षड्जग्रामे एव मध्यमादिमूर्छनासु [illegible] पंचममध्यमेन सह शुद्धपंचमस्य प्रयोगदर्शनात् [illegible]

This was also the argument of Vyankata Makhi when he [illegible] expression वराळीमध्यम. The author [illegible] notes as follows:—

षड्जाद्याः शुद्ध[illegible]
[illegible]
[illegible]
[illegible]

कैशिक्याख्यनिषादश्च काकल्याख्यनिषादकः ।
पंचैते विकृताः शुद्धैः स्वरैर्द्वादश कीर्तिताः ॥

Then come the optional names for some of the vikrita notes.

विहाय स्वस्वसंज्ञा ये स्वरा अन्योन्यसंज्ञिकाः ।
तेषां नामांतराण्यत्र विहितानीह तद्यथा ॥
शुद्ध गांधार एवायं पंचश्रुत्यृषभाव्हयः ।
साधारणाख्यगांधारः षट्श्रुत्यृषभसंज्ञकः ॥
तथा शुद्धनिषादोऽपि स्यात्पंचश्रुतिधैवतः ।
स्यात् कैशिकनिषादोऽपि तथा षट्श्रुतिधैवतः ॥
लक्ष्यानुसारतस्त्वेतत् लौकिकं सुखबोधकम् ॥

On the possible number of melas, and on the selection of only the useful ones from among them, Tulajirao Maharaj says :—

मेला बहुविधास्तत्र द्विसप्ततिरितिस्फुटम् ।
निरूपयति तद्भेदान् चतुर्दंडिप्रकाशिका ॥
एकोनविंशतिस्तत्र तेनैव समुदाहृताः ।
इत्येवं विविधा मेलाः प्रस्तारपरिभाषया ॥
उन्नीतास्तेन तत्रेति त्यक्त्वा तानप्रसिद्धान् ॥

The author of the Saramrita enumerates the following thatas as useful for the classification of his ragas.

तत्र श्रीरागमेलोऽथ शुद्धनाट्याश्च मेलकः ।
ततो मालवगौळस्य वेलावल्याश्च मेलकः ॥
वराळीमेलरामक्रीरागमेलौ ततः परम् ।
शंकरा भरणाख्यस्य मेलः स्यात्तदनन्तरम् ॥
कांबोजीरागमेलः स्याद्भैरव्या मेलकस्ततः ।
मुखारीमेलको वेगवाहिन्याश्चैव मेलकः ॥
सिंधुरामक्रियामेलो हेजिज्जीमेलकस्ततः ।
मेलः सामवराळ्याख्यरागस्यातः परं मतः ॥
वसंतभैरवीमेलो भिन्नषड्जस्य मेलकः ।
देशाक्षीरागमेलोऽथ छायानाटस्य मेलकः ॥
सारंगरागमेलश्च तोडीमेलस्ततःपरम् ।
कल्याणीरागमेलश्चेत्येकविंशतिरीरिताः ॥

मेळनामानि ।

१ श्री	११ वेगवाहिनी
२ शुद्धनाट	१२ सिंधुरामक्री
३ मालवगौळ	१३ हेजिज्जि
४ वेलावली	१४ सामवराळी
५ वराळी	१५ वसंतभैरवी
६ रामक्री	१६ मिश्रषड्ज
७ शंकराभरण	१७ देशाक्षी
८ कांबोजी	१८ नायानट
९ भैरवी	१९ सारंग
१० मुखारी	२० तोडी
	२१ कल्याणी

Each mela is then duly defined thus :—

मेलोत्पन्नेषु रागेषु श्रीरागोऽत्र चिरंतनैः ।
ग्रामराग इति प्रोक्तो रागांगमिति कैश्चन ॥
श्रीरागः परिपूर्णः सग्रहांशन्याससंयुतः ।
गेयः सायान्हसमये क्वच तानविवर्जितः ॥
शुद्धाः स्युः समपाः पंचश्रुतीऋषभधैवती ।
साधारणाख्यगांधारः कैशिक्याख्यनिषादकः ॥

This is practically the Kaphi Thata of the Hindusthani musician. In the southern presidency Shri Raga is still sung with these notes. Our Kaphi Thata, as you have seen, corresponds with their, खरहरप्रिया Thata. I shall not trouble you with the Sanskrit descriptions of the remaining Thatas. Tulajirao Bhonsle was a faithful follower of Vyankata Makhi and the Shruti Swara chart given for the Chaturdandi prakasika will be a good guide to the Shrutis and Swaras of the Sangeet Saramrit. The जन्यराग of Shri Thata will be of some interest to the Hindusthani musicians also

The twenty-one thalas of Tulajirao may be written with their Swaras thus :—

१ श्री.........	सा री ग म प ध नि सां
२ शुद्धनाट......	सा ग ग म प नि नि सां
३ मालवगौड....	सा री ग म प ध नि सां
४ वेलावली......	सा री ग म प ध नि सां
५ वराळी.........	सा री री मं प ध नि सां
६ शुद्धरामक्री...	सा री ग मं प ध नि सां
७ शंकराभरण...	सा री ग म प ध नि सां
८ कांभोजी......	सा री ग म प ध नि सां
९ भैरवी.........	सा री ग म प ध नि सां
१० पुनागी.........	सा री री म प ध ध सां
११ वेगवाहिनी...	सा री ग म प ध नि सां
१२ सिंधुरामक्री...	सा री ग मं प ध नि सां
१३ हेजिज्जी......	सा री ग मं प ध ध सां
१४ सामवराळी...	सा री री म प ध नि सां
१५ वसंतभैरवी...	सा री ग म प ध नि सां
१६ भिन्नषड्ज...	सा री ग म प ध नि सां
१७ देशाक्षी......	सा ग ग म प ध नि सां
१८ सारंग.........	सा री म मं प नि नि सां
१९ छायानट......	सा ग ग म प ध नि सां
२० तोडी.........	सा री ग म प ध नि सां
२१ कल्याणी......	सा री ग मं प ध नि सां

Janak melas, and the janya ragas.

१ श्रीमेल	१ कंनडगौळ, २ देवगांधार, ३ सालंगभैरवी, ४ शुद्धदेसी, ५ माधवमनोहरी, ६ मध्यमग्राम, ७ सैंधवी, ८ हुसेनी, ९ श्रीरंजनी, १० मालवश्री, ११ देवमनोहरी, १२ जयंतसेन, १३ मणिरंग, १४ मध्यमादि, १५ शुद्धधन्यासी
२ शुद्धनाट	१ शुद्धनाट, २ उदयरविचंद्रिका (described as टक्क भाषा)
३ मालवगौड	१ मालवगौड, २ सालंगनाट, ३ आर्द्रदेश, ४ छायागौळ, ५ टक्क, ६ गुर्जरी, ७ गुंडक्री, ८ फलमंजरी, ९ नादरामक्री, १० सौराष्ट्री, ११ मंगलकैशिक, १२ मेचबौळी, १३ मागधी, १४ गौरीमनोहरी, १५ मारूव, १६ गौळीपंतु, १७ सावेरी, १८ पूर्वी, १९ विभास, २० गौळ, २१ ललित, २२ पाडी, २३ कंनडबंगाल, २४ मल्हरी, २५ पूर्णपंचम, २६ बहुली, २७ शुद्धसावेरी, २८ मेघरंजनी, २९ रेवगुप्ति, ३० मालवी.
४ वेलावली	१ वेलावली.
५ वराळी	१ वराळी (भाषाराग of भिन्नपंचम)

६ शुद्धरामक्री	१ शुद्धरामक्री (a क्रियांगराग), २ दीपक
७ शंकराभरण	१ शंकराभरण, २ आरभी, ३ शुद्धवसंत, ४ सरस्वतीमनोहरी, ५ पूर्वगौळ, ६ नारायणी, ७ नारायणदेशाक्षी, ८ सामंत, ९ कुरंजी, १० पूर्णचंद्रिका, ११ सुरसिंधु, १२ हुलाहु (!), १३ गौडमल्लार, १४ केदार, १५ बिलहरी
८ कांबोजी	१ कांबोजी, २ नारायणगौड, ३ केदारगौड, ४ बडहंस, ५ नागध्वनि, ६ छायातरंगिणी, ७ ईशमनोहरी, ८ यदुकुलकांबोजी, ९ नाटकुरंजी, १० कंनड, ११ नटनारायण, १२ आंधाली, १३ साम, १४ मोहन, १५ देवक्री, १६ मोहनकल्याण
९ भैरवी	१ भैरवी, २ अहीरी, ३ घंटारव, ४ इंदुघंटारव, ५ रीतिगौड, ६ आनंद-भैरवी, ७ हिंदोलवसंत, ८ आभेरी, ९ धन्यासी, १० नागगांधारी, ११ हिंदोल.
१० मुखारी	१ मुखारी (This is the same as the Raga शुद्धसाधारित of sharangdeva, says Tulajirao. He does not give reasons though)

Tulajirao explains the statement thus —

सर्वेषु रागमेलेषु मुखारीमेल आदिकः ।
शुद्धैः सप्तस्वरैर्युक्तो मुखारीमेल ईरितः ॥
चतुश्चतुश्चतुश्चैव षड्जमध्यमपंचमाः ।
द्वे द्वे निषादगांधारौ त्रिस्त्रिरिषभधैवतौ ॥
शुद्धा इत्युक्तसंख्याकश्रुतिकाः [illegible] ।
अस्मिन्मेले मुखारी[illegible] ।
लोकप्रसिद्धनामायं शार्ङ्गदेव[illegible] ।
शुद्धसाधारित इति [illegible] ।
रागोऽयमतोऽस्यार्थ[illegible]
[illegible] ।

This is certainly no sufficient reason for [illegible]
What were the seven shuddha swaras of [illegible]
important question Tulajirao never [illegible]
granted that his own Shuddha [illegible]
Sharangdeva, also

११ वेगवाहिनी	१ वेगवाहिनी
१२ सिंधुरामक्री	१ सिंधुरामक्री, २ पंतुवराळी
१३ हेजुज्जी	१ हिजेजी
१४ सामवराळी	१ सामवराळी, २ गांधारपंचम, ३ भिन्नपंचम
१५ वसंतभैरवी	१ वसंतभैरवी, (मध्यमग्रामजन्यत्वसंदेहंजनयति), २ ललितपंचम
१६ भिन्नषड्ज	१ भिन्नषड्ज, २ भूपाल
१७ देशाक्षी	१ देशाक्षी
१८ छायानट	१ छायानट
१९ सारंग	१ सारंग
२० तोडी	१ तोडी
२१ कल्याणी	१ कल्याण

(About 106 Ragas in all.)

In my opinion a happy fusion between the two great music systems of the country is most desirable. When it comes on the Hindusthani system will be considerably enriched. Hundreds of beautiful Ragas can be reintroduced here into our system by our leading living experts. The Southern System again will have an opportunity of adopting our northern graces in the Vadi, Samvadi, rules and thereby of making its music much more interesting. All this however, will be the province of Bhavi Sangeet and thus beyond the province of this paper.

RAGA LAKSHANAM

I shall now make a few remarks on the last of the works referred to in this paper. I am sorry I was unable to obtain a complete copy of this work. I could get only the Raga Adhyaya. Raga Lakshana appears to me to be a very important work. Its importance lies in the fact that it is the real authority for the current Southern system. The "mela" names and the swara names are exactly those found new in the southern presidency. We went through Swara Mela Kalanidhi,

Raga Vibodha, Chaturdandi Prakasika and Sangraha, but we never found the चतुःश्रुति 'ri' and 'dha' taking the place of the shuddha gandhara. We always had चतुःश्रुति रि and चतुःश्रुति ध coinciding with shuddha ga and shuddha ni. Then again we never came across the name प्रतिम for the tivra 'ma'. The shuddha thata was again the "mukhari" and not the present "Kanakangi".

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मेलाधिकारमित्येव मेलानां तु द्विसप्ततिः ।
शुद्धमध्यमषट्चक्रं प्रतिमध्यमसंयुतम् ॥
शुद्धषट्तिविकृतीविवितिमेलविधिः स्मृतः ।
मयमुखे श्रुतिर्वीजयधितिरागर्थपः स्मृताः ॥

अथ शुद्धमध्यममेलकर्तृरागाणां नामान्युच्यन्ते ।

कनकांगी च रत्नांगी गानमूर्तिर्वनस्पतिः ॥
नाभ्रमानवती तानरूपी सेनावती तथा ।
हनुमतोडिविख्याता धेनुका परिकीर्तिता ।
नाटकप्रियमित्युक्तं कोकिलप्रियनामकम् ॥
श्रांता रूपवती चैव गायकप्रियनामकम् ।
वकुलाभरणं चैव मायामालवगौलिका ॥
चक्रवाकमितिप्रोक्तं सूर्यकान्तमितीरितम् ।
हाटकाम्बरिविख्याता झङ्कारध्वनिनामकः ॥
नटभैरवीनामाख्या कीरवाणी ततः परम् ।
खरहरप्रिया चैव तथा गौरीमनोहरी ॥
वरुणप्रियमेलाख्यं मारञ्जनिनामकं ।
चारुकेशी प्रसिद्धा च सरसांगी
हरिकाम्भोजि वै धीरशंकराभरणं
नागानंदिनी योगप्रिया एव

११ वेगवाहिनी	१ वेगवाहिनी
१२ सिंधुरामक्री	१ सिंधुरामक्री, २ पंतुवराळी
१३ हेजुज्जी	१ हिजेजी
१४ सामवराळी	१ सामवराळी, २ गांधारपंचम, ३ भिन्नपंचम
१५ वसंतभैरवी	१ वसंतभैरवी, (मध्यमग्रामजन्यत्वसंदेहंजनयति), २ ललितपंचम
१६ भिन्नषड्ज	१ भिन्नषड्ज, २ भूपाल
१७ देशाक्षी	१ देशाक्षी
१८ छायानट	१ छायानट
१९ सारंग	१ सारंग
२० तोडी	१ तोडी
२१ कल्याणी	१ कल्याण

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[illegible]
[illegible]
[illegible]
[illegible]

[illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

गांगेयभूषिणी नाम वागधीश्वरिनामकं ।
शूलिनीनामविख्याता चलनाटा प्रकीर्तिता ॥

प्रतिमध्यममेलकर्तृरागाणां नामानि ।

सालगो राग इत्युक्तो जलार्णवमतःपरम् ।
नाम्ना झालवराळीच नवनीतमिति स्फुटम् ॥
गवांबोधोति विख्याता भवप्रियमितीरितम् ।
पावनी लोकविख्याता रघुप्रियमितीरितम् ॥
शुभापंतुवराळीच षड्विधामार्गिणी तथा ।
सुवर्णांगीतिविख्याता प्रोक्ता दीव्यमणीतिच ॥
धवलांबरिविख्याता नामनारायणी तथा ।
कामवर्धिनिनामाच रामप्रियमितीरितम् ॥
गमनश्रम इत्युक्तः स्मृता विश्वंभरेतिच ।
श्यामलांगीतिविख्याता षण्मुखप्रियनामकम् ॥
सिंहेंद्रमध्यमाचैव हेमवती सुनामकं ।
धर्मवतीतिविख्याता स्मृता नीतिमतीतिच ॥
कांतामणिस्तथाप्रोक्ता ऋषभप्रियनामकम् ।
लतांगीति प्रसिद्धा च वाचस्पतिरितीरिताः ॥
विख्याता मेचकल्याणी चित्रांबरिस्ततःपरम् ।
सुचरित्रमितिप्रोक्तं तथा ज्योतिःस्वरूपिणी ॥
धातुवर्धिनिविख्याता नासिकाभूषणी तथा ।
कोसलो राग इत्युक्तो रसिकप्रियनामकम् ॥

These are the present 72 Thatas of the Southern Music System this day. The names of the 12 notes which form the foundation of the system are as under:—

सा	री	ग शुद्ध	साधारण ग	अंतर	शुद्ध	प्रति	शुद्ध	शुद्ध	शुद्ध नि	कैशिक नि	काकली
शुद्ध	शुद्ध	चतुःश्रुतिरी	षट्श्रुति री	ग	म	मं	प	ध	चतुःश्रुतिध	षट्श्रुति ध	नि

I do not propose to give the Swaras of the 72 Thatas here on this occasion. There are more than five hundred Janyaragas given under these 72 Thatas with their Arohas and Avarohas complete, but I do not think it necessary to go into the details.

I propose now to complete this long discourse, I have in the foregoing portion touched in a succinct way the sruti, swara, raga,

and thata portions of about 16 treatises My object in this has been, as I said, to show that by a study of the ancient works, we will be in a position to effect certain very beneficial results so far as our present music is concerned I have, therefore, explained which our old books are, which of them are available, and where, and what the system shown in them is, I now propose to show how the study of these is of practical use to us.

As the subject matter of our present music is of the same nature as that of the ancient music, the division and classification of that subject matter as adopted in those texts will come in handy for systematising our present music These can be used as a basis for improvement according to our present conditions

I think that in our present text books, we can safely leave out of consideration that portion of our ancient text books which deals with the physiological theories of the production of sound But we will take the division of the gamut into 22 srutis adopted by these works for our gamut, and fix on it our shuddha scale, same as has been done in those works. It is well-known that our shuddha scale is the Bilawal scale, while that of some of the works is the Kafi scale, and that of others is the Mukhari scale. If the sruti intervals of the ancient works are such as do not satisfy the modern principles of acoustics, these can be determined by modern science, and standardised by consensus of opinion If this is done, then the basis of the structure of our music will be standardised and uniform. The process of describing swaras in terms of srutis, vikrita swaras with reference to the shudda swaras, thatas or genus modes in terms of the swaras and ragas in terms of the thatas etc which has been used in the ancient works can be adopted for our present system But the indefinite method of describing the shuddha swaras used in the texts will have to be improved on by describing the swaras in terms of the length of the speaking wire, of vibrational values, when there is a consensus of opinion as to these When the swaras have been standardised, (are determined,) we can also fix on the number of parent modes under which the existing ragas can be classified and grouped This is to be done by deciding mathematically the number of possible permutations and combinations as has been done by Vyankata Makhi, in his Chaturdandi Prakasika, and then taking from them such as will best fit the present derivative modes When the number of the parent modes has been determined by consensus of opinion, we have to proceed to the classification of the existing ragas under the parent modes, and in this we will be following our ancient treatises Only, we shall fix the classification having regard to the similarity of swaras, vadi note, peculiarity of development and other features between the parent mode and the derivative raga and

not arbitrarily, or blindly following the ancient works. Still, the ru followed in the ancient texts that a derivative Raga must having the same scale as the parent mode, the only difference bei in the swaras deleted or added still remains. In the ancient texts, see an absence of information which is necessary to enable one make an accurate differential diagnosis of derivative ragas comi under the same parent mode. There the differentiation is made in aro avaroha, vadi, time, graha, amsha and nyasa. This differentiati can be amplified by mentioning also the "pakads", or catches, similarity or dissimiliarity of any particular raga, as compared w another derivative of the same thata, whether it is a "purvanga" or "uttaranga" raga, (that is whether its development is in the upper the lower tetrachord),what vivadi note can be used in it and when how, how it compares with a similar raga mentioned in the anci texts, or in vogue in the Karnatik system, and so forth. We can also our text books have illustrations of the "alapa" developement of raga, set to tala and notation according to modern methods of s noting. As it is impossible to reduce to notation all the graces, meen slurs, gamaks, and other alamkaras, the notation may be supplemen by vocal records of practical experts, which records should be inde and registered, and thrown open to the student studying with the h of the notations. If research is able to determine the meaning of pictorial descriptions of the ragas, (and I must mention that there to be found works on the chromatics of sound, such as Field on t Chromatics of Sound), then these pictorial representations can be corporated in our text-books to be, as expounding the aesthetic psychic possibilities of the raga. The ancient works do not throw light on the principles of the compositions of tunes or songs, so that ev one has to fall back on a limited stock of "ustadi" songs, the corre ness of which no one can be sure of as they have never been not and have only been handed down from generation to generation. these principles are determined, and standardised, incorrect versions "ustadi" compositions can be corrected, and also new compositio made. By a study of the works relating to the southern system, we c compose songs for the northern musicians in the ragas which are su there but have not found a place in the northern system, and thus i duce, at some date, how distant soever, a fusion of the two sist systems of music.

In short, having by the study of the texts ascertained the grou work of the system, constructive activity can improve on that grou work and adapt it to the prevailing conditions of education. It is the fore, of great use to study those texts and to obtain from them thorough insight into our music as it was.